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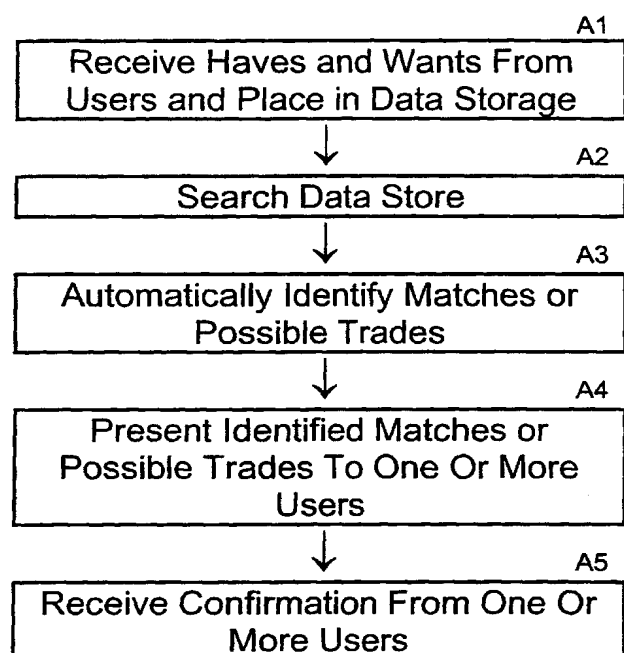
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(54) Title: METHOD AND SYSTEM FOR ON-LINE SALE, BARTER, AND TRADE



(57) Abstract: A network accessible system improves the ability to buy, sell, and barter non-unique items between two or more parties including storing detailed information on items offered and items wanted. The system receives information on items offered and items wanted from users (A1), searches its data store (A2), identifies possible trades (A3), presents these trades to the users potentially involved (A4), and receives confirmation from the users (A5). Trades can involve barter as well as purchase, and may involve a series of exchanges among more than two users.

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METHOD AND SYSTEM FOR ON-LINE SALE, BARTER, AND TRADE

FIELD OF THE INVENTION

This invention relates to electronic commerce. More particularly, the present invention is directed to methods and systems for improving the ability to buy, sell and barter items between two or more parties over an electronic network.

BACKGROUND OF THE INVENTION

This application claims priority from provisional application 60/156,926 filed 09/28/99 which is incorporated herein by reference.

The present invention is best understood in the context of electronic commerce or e-commerce. E-commerce refers to the buying or selling of goods and services electronically over a network. The most common examples of e-commerce involve using the World Wide Web (WWW), which means accessing web sites over the Internet. A few popular e-commerce web sites include www.ebay.com, www.onsale.com, www.amazon.com, and www.landsend.com. In addition, many newspapers have on-line versions of classified advertisement sections, such as classifieds.sjmercury.com, and other all electronic classified sites are available.

With the rising popularity of personal computers along with the wide availability of inexpensive, easy access to the Internet, e-commerce is expanding rapidly. Many types of goods and services can be bought and sold over the Internet. To support the huge market for electronic transactions, many schemes for buying, selling and trading goods have been devised.

FIG 1 illustrates a typical prior art model for an end-user to access e-commerce web sites over the Internet. Many of these schemes evolved from traditional methods for doing business. For example, a catalog company such as "Land's End" makes its catalog electronically available and allows customers to transact business over the Internet directly, replacing some of its phone order, fax order and traditional mail order business. This model supports the rapid, direct purchase of a limited set of goods. No bartering is supported and the vendor sets the price.

Auction and reverse-auction style web sites have sprouted up to support selling goods and services at rates set by the bidding audience. The most popular example of this type of web sites is www.ebay.com. While the traditional auction house, such as Christie's, often sells unique, expensive items, eBay's auction site supports the sale of less expensive, common items such as printers, golf clubs and airplane tickets. eBay also supports the auctioning of inexpensive items such as used baby clothes, movie posters and memorabilia, with many items selling at under \$10.00.

Another popular auction web site is operated by Onsale, Inc., described in part in U.S. Pat. No. 5,835,896 entitled "Method and System for Processing and Transmitting Electronic Auction Information". A drawback to the auction schemes used at these sites can be time consuming to use. Typically, the bidding is open for a few hours up to a week and it is not uncommon to take a week or
5 more to complete a transaction. Furthermore, items of interest can be difficult to locate.

Many of these sites are very seller-focused and do not support barter. In addition, the classification schemes are typically static and specialty items can be hard to locate. Also, once a seller puts an item up for auction, they are usually obligated to sell the item through that auction unless certain minimum price constraints are not met. This means that sellers are required to hold on to their inventory
10 until the auction is complete. If they were to receive a superior independent offer, they could not take advantage of it unless and until the auction failed. Because many auctions can take a week to complete, this can be inconvenient.

Bulletin boards and mailing lists can offer buyers and sellers in niche markets a sense of community, but they rarely provide an efficient, fast or effective way to match buyers and sellers and complete transactions. Furthermore, they are usually not general purpose, so someone attempting to sell a
15 variety of items such as a Beanie Baby®, a movie poster and an autographed baseball card would probably have to locate three different focused bulletin boards to reach the appropriate target audiences. Also, it can be hard for a buyer or seller to easily understand the current market value of a niche item such as a particular Beanie Baby® in mint condition.

Classified advertisements and their on-line electronic counterparts such as classifieds.sjmercury.com support buying and selling a broad range of goods and services but classifieds can be difficult to search and usually do not provide support for suggesting barter transactions. Goods are statically categorized and this venue does not provide the type of community that can be found on a bulletin board. However, classifieds have one advantage over previous auction sites in that posting an ad
20 does not require that sellers hold on to their inventory. If a better deal can be established independent of the classified advertisement, the seller may act upon it.

Another problem encountered by buyers and sellers of goods generally is establishing a market price for the goods. Stock markets, such as the New York Stock Exchange (NYSE), have a clearer way of establishing a market value of a share of stock based on multiple bids to buy and sell. Patent 4,903,201,
30 "Automated Futures Trading Exchange" describes a system where bids and offers are automatically matched and market values for futures are determined by the process. However, these environments are not typically open to the public and only support buying and selling a very narrow range of products such as futures commodity contracts by members of a futures trading exchange or registered stocks or bonds.

Furthermore, such a system only supports direct matches. It does not support barter, 3-way exchanges or detailed classification schemes so that buyers and sellers can easily locate a variety of items.

A few on-line barter sites have existed near the time the present invention was being developed. These are mostly focused on B2B trading. For example, "A Barter" is a service offered by The Royal Den Publishing Corporation, a small firm focused on unique, unusual and controversial books. They have a limited Web site, and require a \$10 registration payment before providing access to the site. "eBarter" has traditionally focused on businesses, and have a limited service available to individuals. They have a narrow range and small number of items available on their site.

SUMMARY OF THE INVENTION

The present invention entails using a network accessible data store with related business processes to manage large amounts of data to improve the buying, selling and bartering of non-unique items. In various embodiments, a classification and searching method makes it easy for buyers and sellers to locate each other and determine the current fair market value of non-unique items. A method for identifying and proposing transactions including 3-way barterers can be used to improve the chances of a transaction taking place. In various embodiments, a graphical user interface (GUI) guides potential buyers, sellers and traders through the processes of posting items, locating items and buying, selling or trading items. In further embodiments, the present invention can be integrated with third party web sites.

In specific embodiments, a network accessible application provides access to a large data store that stores data related to goods and services offered as well as goods and services desired. Buyers, sellers and traders can search the data store and various views into the data store are created to help buyers, sellers and traders locate items of interest and determine their market value. Examples of information stored in the database include, but are not limited to: a free text description of the item or service, pictures, condition and estimated value.

In a further embodiment, custom views of the information in the data store, called zones, can be created as a service to communities. The creator of a zone defines a view into the data store for a focused interest group by searching the database according to a set of criteria. These zones focus the attention of buyers, sellers and traders. Zones increase the likelihood of making a transaction and are especially important for niche markets and uncommon items.

In a further embodiment, automation assists buyers, sellers and traders in identifying potential transactions based on their stated interests. The automation searches the data store for items of interest and then generates a list of possible transactions to consider. These potential transactions may include barter transactions and transactions involving two or more parties.

In a further embodiment, views into the data store can be integrated with third party web sites and applications. Access to the business transactions, views of the database, transaction automation processes

and zones can be granted and subsequently integrated to increase the audience and likelihood of completing a transaction. The market value of goods and services is set most efficiently when there are many offers and many transactions completed.

FIG 2 illustrates how the current invention represents the convergence of markets previously served through auctions, classified ads and Internet communities.

A further understanding of the invention can be had from the detailed discussion of specific embodiments below. For purposes of clarity, this discussion may refer to devices, methods, and concepts in terms of specific examples. However, the method of the present invention may operate with a wide variety of types of devices. It is therefore intended that the invention not be limited except as provided in the attached claims.

Furthermore, it is well known in the art that logic or software systems can include a wide variety of different components and different functions in a modular fashion. Different embodiments of a system can include different mixtures of elements and functions and may group various functions as parts of various elements. For purposes of clarity, the invention is described in terms of systems that include many different innovative components and innovative combinations of components. No inference should be taken to limit the invention to combinations containing all of the innovative components listed in any illustrative embodiment in the specification, and the invention should not be limited except as provided in the embodiments described in the attached claims.

All publications, patents, and patent applications cited herein are hereby incorporated by reference in their entirety for all purposes.

In various embodiments and according to various aspects, the present invention provides a method and/or system for easily and quickly buying, selling and bartering non-unique items. In particular embodiments, the invention provides an efficient search method for locating items of interest as well as potential buyers and sellers. In a further embodiment, the market value for non-unique goods can be set based on offers to sell and offers to buy. In a further embodiment, transactions involving three or more parties may be facilitated to increase the possibility of a transaction taking place.

In further embodiments, by clearly displaying information on multiple offers to buy and sell, the market price on non-unique items is set. Users can easily search for items of interest and the invention suggests suitable transactions including 3-way trades.

The invention will be better understood with reference to the following drawings and detailed description.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 illustrates a standard method for end-users accessing e-commerce web sites over the Internet according to the prior art.

FIG. 2 illustrates conceptually how the current invention represents a convergence of markets.

FIG. 3 illustrates operation of automatic trading according to an embodiment of the present invention.

FIG. 4 illustrates a greeting web page from an embodiment of the invention.

5 FIG 5 illustrates a web page displaying search results according to an embodiment of the invention.

FIG 6 illustrates a web page that a user would complete to register on-line according to an embodiment of the invention.

10 FIG 7 illustrates a portion of a web site displaying a user's personalized area according to an embodiment of the invention.

FIG 8 is an example of a portion of a web site for guiding the user through posting an item for sale or barter according to an embodiment of the invention.

FIG 9 is an example of a portion of a web site for guiding a user through the process of posting a notice for a wanted item according to an embodiment of the invention.

15 FIG 10A illustrates a method for facilitating an N-way transactions according to an embodiment of the invention.

FIG 10B illustrates a web page displaying system-identified three-way transactions according to an embodiment of the invention.

20 FIG 11 illustrates a web page displaying selection of a specific trading partner to send a user goods the user wants.

FIG 12 illustrates a web page displaying selection of a specific trading partner to receive goods that a user has.

FIG 13 illustrates a portion of a web page displaying the three-way transaction with the ability to enter an edit dialog according to an embodiment of the invention.

25 FIG 14 illustrates a web page for entering special conditions associated with a transaction according to an embodiment of the invention.

FIG 15 illustrates a web page for editing the details of a transaction according to an embodiment of the invention.

30 FIG 16 illustrates a portion of a web page showing a three-way deal review according to an embodiment of the invention.

FIG 17 illustrates a portion of a web page showing a rating questionnaire according to an embodiment of the invention.

FIG 18 illustrates a web site showing a user rating according to an embodiment of the invention.

FIG 19 illustrates an example of a web page displaying the results of a free text search in one embodiment of the invention.

FIG 20 illustrates a web page listing available categories in one embodiment of the current invention.

5 FIG 21 illustrates an example of a web page that might be accessed in navigating through subcategories according to an embodiment of the invention.

FIG 22 illustrates an example of a web page that might be accessed in navigating through subcategories according to an embodiment of the invention.

10 FIG 23 illustrates a further example of a web page that might be accessed in navigating through subcategories according to an embodiment of the invention.

FIG 24 illustrates an example of a web page showing a list of zones available for browsing according to an embodiment of the invention.

FIG 25 is an example of a web page displaying the first page of a zone according to an embodiment of the invention.

15 FIG 26 illustrates an example of a web site illustrating the gardening supplies offered through the Gardening Zone according to an embodiment of the invention.

FIG 27 illustrates several offers for buying and selling a Maple Beanie Baby® according to an embodiment of the invention.

FIG 28 illustrates an example trading system according to an embodiment of the invention.

20 FIG 29 illustrates an example trading system with additional details according to a further embodiment of the invention.

DESCRIPTION OF SPECIFIC EMBODIMENTS

1. Overall System

1.1. Overall System

25 The present invention is preferably implemented as a computer program running on a network accessible server computer or computers. In one embodiment, the network is the Internet, however the invention could be implemented for use with other networks such as a Local Area Network or LAN or subscriber networks such as AOL. Among other possible user interfaces, the methods described above can be embodied in a system of GUIs that can be made available through a web site. General methods for
30 construction and operation of such systems are well known in the art, and the present invention can be understood as operating in a way roughly similar to other on-line selling websites, except as specified herein.

1.2. *Typical Users*

In one embodiment, the present invention is optimized to allow person-to-person barter among individual consumers, however users of the invention could be individuals or commercial businesses. For business sellers especially, a specific embodiment of the invention has advantages over on-line auctions because a seller does not need to keep inventory on hold while waiting for a transaction to complete.

In one embodiment, the invention supports the buying, selling and bartering of goods between two businesses. For example, a printing business may choose to offer business stationary printing services through the invention to other businesses in exchange for money or professional bookkeeping services.

1.3. *User Registration*

In an embodiment of the invention, users register to establish a unique identity. In some embodiments of the current invention, users are required to register and log in before performing certain activities. Examples of these activities may include, but are not limited to: posting an item (have or wants) or making an offer.

In some embodiments of the current invention, the user may be guided through the registration process via a GUI, an example of which is shown in FIG 6.

1.4. *Personalized Interface*

In some embodiments of the invention, the invention can keep track of user specific information through the unique identity and provide the users access to this information through their personalized interface. Examples of user specific information include, but are not limited to: lists of the user's items offered for sale or barter, lists of items desired, the status of any transactions, offers from other users, system suggested deals, user ratings, trading history and "to do" lists regarding completion of a transaction. When accessing the invention, users can obtain access to a personalized interface based on that unique identity. FIG 7 illustrates a portion of a web site displaying a user's personalized area according to an embodiment of the invention.

2. **Organizing and Locating Items**

In addition to the buyer, seller and contact information discussed above, the invention stores detailed information related to goods and services offered as well as goods and services desired. This information can include free text description of the item or service, category and subcategory information, pictures, condition, estimated value, trader e-mail addresses, and message boards.

According to one embodiment of the invention, items are stored with an identification into a strict category tree. Every item is in just one location, and that location is either a top-level category location, or a subcategory location. To facilitate finding items of interest, items may also be collected into zones, as discussed below.

An alternative embodiment may further allow items to be stored in multiple category locations or without a category designation.

In another embodiment of the invention, users can access information about potential trading partners. Example of this information includes, but is not limited to: the user's name, city and state as well as the number of trades completed, how long they have been a user and a list of items offered and items desired.

2.1. Categories

In one embodiment of the invention, all items offered for sale or trade must be associated with one, and only one, terminus location in a category tree. Examples of categories include, but are not limited to: Music, Collectibles, Books, Vacation, and Gardening. Categories may have multiple levels of subcategories. For example, the Collectibles category might contain the following subcategories: Trading Cards, Collectible Coins, and Collectible Stamps. The Trading Cards subcategory might contain further subcategories such as: Sports Cards, Pokemon Cards and Magic: The Gathering Cards.

2.2. Message Board

In some embodiments of the current invention, items offered and/or items requested, can have associated with them a message board. A message board facilitates communication about a specific item and prevents the user who is offering or requesting the item from having to answer repeated questions. For example, a user might offer a book for sale and provide the title, author and condition of the book. An interested party might inquire if the book is hard cover or soft cover in the message board. In this example, the user offering the book might respond that the book is hard cover. Alternately, a knowledgeable user might notice the item and related message board and post a reply stating that the book was only published with a hard cover.

2.3. Zones

According to a further embodiment of the invention, the invention provides a further method for grouping items that have some relation to one another, herein referred to as "Zones."

A zone, according to this embodiment, is a view into a data store of items that may be set up and maintained by a content host or expert. According to an embodiment of the invention, items may appear in a single category and multiple zones. For example, a CD by the band U2 might appear under in the "Music" category, the "Rock" subcategory, and the "CDs" subcategory. However, the CD might further be collected under multiple zones and subzones, such as: Irish Rock; U2 Fans; 1980s nostalgia, etc.

Zones are generally created by a host or a content expert, based on a specific area of interest or expertise. For example, a Beanie Baby® collector might create and then host a Beanie Baby® Zone. Based on their knowledge of the field, they devise a view of the data store that will reflect items and

services of interest to a focused community. This makes it easier for users to quickly focus on items of interest. Thus, natural communities of shared interest can evolve.

In one embodiment, a zone founder would establish a set of queries into the data store that create a custom search of the database. This search may be executed at regular intervals so that the zone would be updated with newly added goods and services. For example, the Beanie Baby® zone founder might establish a set of queries for locating Beanie Babies as well as small bins for storing Beanie Babies, Beanie Baby® books and other items known to be of interest to Beanie Baby® enthusiasts. The seller of a small storage bin might not realize that it would be of interest to a Beanie Baby® enthusiast and would not know to market this item to that community. In spite of this, the small bins could automatically appear in the Beanie Baby® Zone based on the zone founder's search criteria and be marketed to a focused audience regardless of the sellers original categorization. This increases the possibility of generating a transaction.

The set of queries that create the view may be updated regularly to incorporate new trends and developments in the area of interest. Newly posted items appear automatically and expired or out-of date information is removed from the view. In some embodiments of the current invention, this may be done by frequently running the queries and caching the results for users to access rapidly. In other embodiments of the current invention, the queries may be executed each time a user accesses a zone. In another embodiment, a zone founder might maintain the zone to address developments in the field of interest. So, if U2 were to add a new member to the band, the founder or host for the "U2 Fan Zone" would need to update the queries that create the zone to include the new member's name so memorabilia related to the new band member would show up in the zone. In other embodiments of the invention, a zone founder would identify entire categories and/or subcategories for inclusion in their zone. Items might also be added or deleted from a zone by a zone host "by hand" after a review of a particular item.

In another embodiment of the invention, the zone founder creates and names multiple levels of subcategories within the zone. For example, the "U2 Fan Zone" might include some of the following subcategories: photographs, autographs, t-shirts and CDs. The autograph subcategory might include subcategories for each member of the band. In addition to zones created and maintained by "volunteers," the invention may also include system zones that are established by the managers of the auction site. In some embodiments of the invention, the zones are presented to the user listed in order of item count. This emphasizes the categories with high activity. However, other presentations are possible. In another embodiment of the invention, the zones contain additional related information. Examples of such information include, but are not limited to: articles on relevant subject matter, message boards, polls and reference materials. In specific embodiments, the auction site provider may implement some review or approval of zones and the activity of zone hosts.

The invention includes a system for establishing and maintaining a zone by a zone host. By identifying queries (or search criteria) and/or complete categories and/or sub-categories for inclusion, the zone founder is able to establish and maintain a view into the data store. New queries (or search criteria) and/or categories and/or sub-categories can be added to the list of queries (or search criteria) that
5 compose the zone and old queries (or search criteria) and/or categories and/or subcategories may be changed or deleted.

2.4. Zone Host Compensation

In one embodiment of the invention, some zones may be created and maintained independently of the owners of the auction site, generally by an independent volunteer zone host, who may receive some
10 consideration for sales made from that host's zone view. In some embodiments of the invention, the compensation may be related to the number of visitors to the zone. In other embodiments of the invention, the compensation may be related to the number of transactions that were completed as the result of a visit to a particular zone. In some embodiments of the current invention, the invention may track sales placed through a zone to compensate a zone host.

2.5. Manual Searching

The invention includes a system for searching the network accessible database. FIG 4 illustrates an example of a web page supporting a free-text search for locating items according to an embodiment of the invention. In this example, the end-user inputs a word or words that describe the item of interest into the field marked "Search". The database is searched and a list of possible matches is produced to guide
20 the end user to the item of interest. FIG 5 illustrates a web page displaying search results according to an embodiment of the invention.

According to the invention, there are multiple methods for manually searching for an item of interest: a free text search; traversal of category trees as shown in FIG 20 and further in FIG 21-23; and browsing through zones.

For zone browsing, a zone of interest might be identified through a web site with a drop down menu as illustrated in FIG 24. For example, a user interested in locating gardening supplies might investigate the Gardening zone. FIG 25 is an example of a web page displaying the first page of a zone according to an embodiment of the invention. The user might locate items of interest by navigating to the supplies section of the Gardening Zone. FIG 26 illustrates an example of a web site illustrating the
30 gardening supplies offered through the Gardening Zone according to an embodiment of the invention.

3. Listing Items (Haves and Wants) and Completing a Trade

3.1. *Posting an Item*

FIG 8 is an example of a web site that guides the user through posting an item for sale or barter according to an embodiment of the invention. In this example, the user is able to put information related to the item offered for sale or barter in the on-line form and submit it for posting. The processes and user interfaces for posting a notice for a desired item is similar to the process for posting an item for sale or barter. Examples of the web sites for guiding a user through the process of posting a notice for a wanted item is illustrated in FIG 9. The invention supports end users posting their items for sale or barter as well as posting wanted items. Note that the invention supports selling, bartering and offers to buy or barter. Combinations of selling and bartering are also supported such as swapping a poster for a U2 CD and \$5.00.

3.2. *Automatic Matching and N-way Transactions*

FIG 10A illustrates a general method for performing an automatic match. While most commonly known auction sites require buyers to actively search for items, the present invention, in one embodiment, automatically identifies trades based on the haves and wants listed in the data storage (Step A1). According to one embodiment, the data store is searched (Step A2) to automatically identify matches between items offered for sale or barter and items desired (Step A3). According to various embodiments of the invention, 2-way, three-way and/or N-way matches may be identified and suggested to the users (Step A4) and a response may be received from one or more users (Step A5). In some embodiments of the invention, these matches are made based on keywords in the title and/or description. In further embodiments of the invention, matches may be made with other consideration such as category or sub-category. This provides an advantage over typical auction style venue where users must frequently actively look for items they are interested in obtaining.

By suggesting and supporting three-way transactions, the invention increases the likelihood of a transaction occurring. Allowing a third party to participate in a trade significantly increases the likelihood of a match. FIG 10B illustrates a method for executing a three-way transaction according to a specific embodiment of the invention. The process for executing three-way transactions begins when the computer identifies possible three-way matches (Step B1). The system then presents the possible matches to some or all parties and waits for a party to take action (Step B2). A user then selects one of the proposed trades to pursue (Step B3). The user then selects a specific item or items and a specific trading partner to receive goods, money and/or services from (Step B4). For a 3-way trade, the user then selects a third trading partner (Step B5) and may then choose to adjust the details of the transaction (Step B6). The offer may be reviewed and then submitted (Step B7). The other parties are notified of the active offer (Step B8) The

other parties may accept, reject or counteroffer. If all parties accept, then they are all notified of the completed deal (Step B9).

In some embodiments of the current invention, a user interface may be used to guide the user through a process of completing a three-way transaction according to specific embodiments of the invention, as indicated by FIGs 10-16.

In some embodiments of the invention, the list of proposed deals are presented to the user ordered according to one or more criteria. Examples of ordering criteria include, but are not limited to: the proximity of the estimated value of the item or items to be swapped and how good each match is based on how well the item descriptions, categories and/or subcategories for items offered match the items desired.

For some embodiments of the invention, when a transaction is completed, the users involved in the transaction may rate each other. FIG 17 illustrates a web page showing a rating questionnaire according to an embodiment of the invention. In some embodiments of the invention, the results of these questionnaires are compiled and associated with each user for review by potential trading partners. FIG 18 illustrates a web site showing a user rating according to an embodiment of the invention.

In a further embodiment, an N-way transaction can be completed like a two-way automatic match described herein, by the system automatically completing an N-way transaction when all the users identified have indicated HAVES and WANTS with automatic trading.

In particular embodiments, this transaction can be constructed within the matching system as a Swap Chain. In a Swap Chain, the system automatically identifies a three or more way match. In further embodiments, this match can, in some cases, produce excess value in the system.

For example, suppose the situation of the following three users:

1. Ann wants a "Cherry Pie" CD and is willing to pay up to \$8;
2. Bob has a "Cherry Pie" CD and is willing to sell it for \$10 or more or trade for a "Born in the USA" CD;
3. Cathy has a "Born in the USA" CD, that she is willing to sell for \$7.

In this situation, without N-way matching, no trades can be made. However, with N-way matching, as described herein

Cathy ← gets \$7 from Ann ← gets "Cherry Pie" from Bob ← gets "Born in USA" from Cathy.

Note that in this situation, everyone gets a trade that they wanted; however, Ann gets her CD for \$1 less than she was willing to pay for it. Thus, a system using an N-way matching not only creates the possibility for a match that did not exist before, but can also create excess value in the overall transaction that did not exist before. In various embodiments of the invention, this added value can be used in different ways. One use is for the excess value or part of it to be retained by the system. This would help

defray operating costs and may allow the system to perform its transaction services without charging any additional fees for them. Another way the added value or a part thereof can be used is as a reward shared among all the participants in the trade. Thus, if the dollar were distributed evenly, effectively:

Cathy ← \$7.66 from Ann ← “Cherry Pie” from Bob ← “Born in USA” + \$.33 ← from Cathy.

A third way the added value or a part thereof can be used is to facilitate trades that otherwise could not occur. Suppose in the example above, Bob is only willing to trade “Cherry Pie” for “Born in USA” plus \$1. In this case, the extra \$1 Ann is willing to pay for “Cherry Pie” is used to pay Bob. So, effectively

Cathy ← \$8.00 from Ann ← “Cherry Pie” from Bob ← “Born in USA” + \$1.00 ← from Cathy.

Of course, a system according to the present invention can handle the transaction so that Cathy never handles the excess dollar or is even aware of it. Instead, the system can handle the cash part of the transaction, and each trader simply knows that he or she got exactly the trade he or she wanted.

As a variation on this, a system can construct partial Swap chains, and use the excess value or the other items available for trade in a listing service to present to new users additional trading options. Again, suppose the following users:

- 1. Ann wants a “Cherry Pie” CD and is willing to pay up to \$8;**
- 2. Bob has a “Cherry Pie” CD and is willing to sell it for \$10 or more or trade for a “Born in the USA” Bruce Springstein CD;**
- 3. Cathy has a “Born in the USA” CD, that she is willing to sell for \$11 or more or trade for a “Cat Scratch Fever” CD.**
- 4. David has a “Cat Scratch Fever” CD that he is willing to sell for \$9.**

In this situation, no trades are possible. So the items will be stored and can be listed for a new user to browse. Note that, without automatic matching, a user browsing might see something like:

Offers to Buy	Offers to Trade		Offers to Sell
	You Can Get	If You Have	
1. \$8 for “Cherry Pie”	1. “Cherry Pie”	“Born in the USA”	1. “Cherry Pie” for \$10
	2. “Born in the USA”	“Cat Scratch Fever”	2. “Born in the USA” for \$11
	3. “Cat Scratch Fever”	“Cherry Pie”	3. “Cat Scratch Fever” for \$9

However, with N-way matching, in the above case, a new user might see something like:

Offers to Buy	Offers to Trade		Offers to Sell
	You Can Get	If You Have	
1. \$8 for “Cherry Pie”	1. “Cherry Pie”	“Born in the USA”	1. “Cherry Pie” for \$10
2. \$8 for “Cat Scratch Fever”	2. “Born in the USA”	“Cat Scratch Fever”	2. “Born in the USA” for \$9

3. \$8 for "Born in the USA"	3. "Cherry Pie"	"Cat Scratch Fever"	3. "Cat Scratch Fever" for \$9
	4. "Born in the USA"	"Cherry Pie" + \$3	4. "Born in the USA" for \$11

In this situation, a new user will not only see more total offers to buy and sell, the user may also see better prices. For example, the new user will see a price of \$9 for a "Born in the USA" CD, versus \$11 in the previous example. Note, that with N-way matching, the number of possible trades presented to a user can increase substantially. In the first Table, there are six directly proposed trades. In the second example, using N-way matching, there are eleven possible trades. (Additional trades may be possible in these examples, depending on the complexity of trades allowed by the N-way matching algorithm.) The 4th offer to sell in this example is struck through, because in some embodiments only the best available price will be presented to a new user.

Note also, that in some embodiments, the underlying actual trades may be hidden from a user. In an advanced system, an offer such as ("Cat Scratch Fever" for \$2) might be based on that offer completing a complex trade among many different users, some of whom get money only, some of whom get goods only, and some of whom get or give a combination of goods and money. However, despite the complexity of the underlying trade, the user is exposed only to the part of the transaction affecting the user.

For example, at the completion of a trade, Ann might get the message. "We have completed a trade for your "Cherry Pie" CD at a price of \$8.00. The \$8.00 is being charged to your account and your CD will be shipped to you by Bob_Smith@mail.com."

Bob might get the message. "We have completed a trade for you. Please ship your 'Cherry Pie' CD to Ann at 111 Main Drive, Anytown, CT 11001. Your 'Born in the USA' CD will be shipped to you by CathyJones@geocities.com."

Other parties would get similar messages detailing only their part of the trade. Thus, even if Bob and Ann are ultimately involved in a complex 13-Way trade, they only need to know and worry about the send and receive steps directly affecting them. Transactions further can be simplified by having all financial payments handled by the central system. Thus, Ann's payment of \$8.00 might actually be distributed to multiple end users to make a trade, but Ann is only aware that her account was debited \$8.00, and the receivers are only aware of a total credit for a transaction, not where it came from.

Note further that capturing the excess value from a number of user desired trades can substantially reduce the cost of some items and allow trades to complete with harder to sell items that have a high value. This system thus captures the inequality between the value a user attributes to an item the user would like to get rid of and the value a user places on an item the user is hoping to acquire.

Internally, in a matching system according to specific embodiments of the present invention, potential swaps can be represented as one or more opened "swap chains." In most instances, connecting any two points in the chain represents at least one possible "completing swap" that can be presented to new users as an available trade. These completion trades are in addition to the trades proposed directly by the users in the database. Thus, for a simple case, a two-trade uncompleted chain, with N-way analysis, provides 1 additional possible completion trade. A three-trade uncompleted chain, with N-way analysis, provides 2 more (3 total) additional possible completion trades. A four-trade uncompleted chain, with N-way analysis, provides 6 total additional possible completion trades. A five-trade uncompleted chain, with N-way analysis, provides 10 total additional possible completion trades.

Using the five-trade chain, consider the example.

User	Wants	Has
A	1	2
B	2	3
C	3	4
D	4	5
E	5	6.

Without the N-way analysis, the proposed trades shown to a new user would simple be the five trades shown. A user with any item in the **Want** column could get for it just the corresponding item in the **Has** column. With N-way analysis, the additional proposed trades would be:

User	Wants	Has
x	1	3
x	1	4
x	1	5
x	1	6
x	2	4
x	2	5
x	2	6
x	3	5
x	3	6
x	4	6.

Thus, a new user with an item to trade may see many additional items they can get in return for that item and the total number of proposed trades by the system is greatly increased, thus making the system more attractive to new buyers, sellers, and traders.

3.3. "Automatic Markdowns"

In a further embodiment, a system according to the invention can include an automatic discounting feature for items listed for a period of time. To activate such a feature, an item would have a posted initial selling price that would remain in effect for a set period, for example three days. After that period, if the item is not sold, the selling price is reduced by an amount, such as by \$2.00 or by a percentage, such as 25%. The item then remains listed at this price for a period, for example two or three

days, and the price is again reduced by an amount, such as \$3.00 or such as 15%. This proceeds until a minimum price is reached, wherein the item may remain listed indefinitely at the minimum price, or be delisted, or a seller may be given some other option.

This automatic markdown feature can be used in a number of ways to attract sellers and buyers to a website based on the invention. For attracting sellers, for example, a seller may be given an option of a free listing of an item for several days at the full price, if the seller agrees to accept the automatic markdown price if the item does not sell. A seller may also be given the option of setting a lowest acceptable price for automatic markdown (possibly with the requirement that it is below a certain markdown from the retail value). In an alternative embodiment, a seller may be given the option at the seller's listing time or when the first period expires of paying a listing fee to keep an item listed at the original price.

To buyers, the presence of "Automatic Markdowns" items creates the attraction of getting a very good deal on some items. Items with Automatic Markdown may be featured as the first listed items in any search or otherwise highlighted (a further inducement to sellers as well). Items with an active "Automatic Markdown" may also be displayed to potential buyers listing their current sale price and their sale price after one or more active expiration periods. Providing such a service using a computer system has an advantage over "Brick and Mortar" stores who offer "Automatic Markdowns" in that the potential buyers can see the actual sale price on a definite date, rather than having to calculate dates and percentage markdowns in their heads while shopping as in common in tagged items at "Brick and Mortar" stores. The present invention also allows for multiple sellers in a C2C type computer exchange to participate for the first time in an "Automatic Markdown" selling promotion system.

4. Determining the Market Value of an Item

As discussed above, existing online auction sites generally sell each item as though it were entirely unique and run a unique and separate auction for each item (or several identical items posted by the same seller at the same time in a "Dutch Auction".) In fact, over several weeks, many identical items might be sold and bid on by many people. Two types of information are generally lost in such a system. First is the "sale price" data over many different sales of similar items that tend to indicate a market price. Second is the existence, identity, and price offered of the willing buyers who lost the particular auction in which they placed a bid. There may be sellers of that identical item who would be willing to sell at the price that the losing buyer is willing to pay, but standard auction systems such as eBay do not provide an easy mechanism for either a buyer or a second seller to complete that transaction. The buyer first has to find the second auction, place a second bid, and then await the outcome of that auction before then looking for a third auction and placing a bid in the third auction. If multiple auctions for the same item are

taking place simultaneously, the buyer may not want to place auctions in two bids, thereby risking being obligated to pay for two items when he or she only wants one.

In a further embodiment of the invention, each user may pursue multiple transactions with the same item. For example, a user may post an item offered for sale or trade. Multiple other users may initiate a transaction for that item by submitting offers of money and/or goods and/or services. The user who originally posted the item can pursue deals associated with that item with as many parties as they like simultaneously since none of the deals are binding until all parties to the deal have accepted it. Once a deal is accepted by all parties to the deal, the other deals may be rejected. By enabling users to pursue deals in parallel, the speed with which a successful deal can be consummated is increased. Furthermore, this model is very attractive for dealers because there is no commitment on the part of the seller to sell the item once it is listed. According to one embodiment of the invention, users may accept, reject or make counteroffers in response to any offer and items offered as well as items desired may be edited or removed from the system. In addition, sellers may continue to attempt to sell the item through other means. The seller is not required to hold on to inventory as with most auction style systems. For example, an antique dealer may choose to put an item in their storefront for sale as well as post it to the current invention. The dealer can take advantage of whichever venue provides the best or most timely deal. In contrast, most on-line auction sites auction items off over a time period. In some cases, this time period is as long as a week. For that week, the seller must hold on to the item pending a successful auction so that the item can be delivered. If the auction fails, the seller has been forced to hold their item out of circulation, possibly losing a sale or trade during that time.

The present invention, in one embodiment, therefore creates more of a "market" transaction for sales rather than a series of individual auctions. Over time, several buyers post their offers to buy and several sellers post their offers to sell. Prospective buyers, sellers and traders can query the database to produce details on all active relevant offers. All users can infer the market value by comparing the highest buy offers with the lowest sell offers.

The invention includes a system for identifying the market value of a non-unique item. FIG 27 is an example of a GUI displaying several offers for buying and selling a Maple Beanie Baby®.

5. Example System

FIG 28 illustrates an example trading system according to specific embodiments of the invention. As shown in the figure, a database of Haves and Wants 510 is accessed through a set of GUIs 505 over a network 20 by one or more clients 10. As described herein, the GUIs provide various interfaces according to specific embodiments of the invention allowing the clients to browse or modify data in database 510. Various engines or logic modules, such as identifier 520b can also analyze data in 510 and trigger actions such as a notification via engine 520a.

FIG 29 illustrates an example trading system with additional details according to further embodiments of the invention. The figure shows that in some embodiments, each user is identified with an identity 12. The system can also have additional databases, such as Buyer/Seller contact database 511 and additional logic modules for operating on the data, such as price engine 540 and search facility 550. These modules operate according to various embodiments as described herein.

6. Other Embodiments

Access to the invention can be integrated into other systems. The database, GUI, processes and/or transactions, can be made available via a third party web site. Allowing other communities to access the invention increases the number of potential buyers, sellers and traders and makes setting the market value on non-unique items more efficient.

The invention may be operated for profit based on several different strategies. In one embodiment, the users who post offered items and/or desired items may be charged a listing fee, whether or not the item sells and regardless of the price. In other cases, fees might be established per transaction based on the estimated value of the item or items involved in the transaction. Other strategies are possible within the scope of the invention.

It will be apparent to those of skill in the art that many various embodiments are possible according to the invention. It is understood that the examples and embodiments described herein are for illustrative purposes only and that various modifications or changes in light thereof will be suggested to persons skilled in the art and are to be included within the spirit and purview of this application and scope of the appended claims. All publications, patents, and patent applications cited herein are hereby incorporated by reference in their entirety for all purposes.

WHAT IS CLAIMED IS:

1. A method of exchanging goods using a computer network comprising:
storing a plurality of item entries available for exchange in a database;
accepting from a current user a new entry indicating an item said user wishes to exchange;
5 scanning said database to identify a matching trade for said new item entry and an item in said database; and
if a trade is identified, presenting said trade to a user, with an indication allowing a user to take action on said trade.
2. A method according to claim 1 wherein an entry stored in said database comprises one or more
10 wants paired with one or more haves.
3. A method according to claim 1 wherein said database includes at least one entry indicating an item for exchange for a selling price and at least one item for exchange for another item.
4. A method according to claim 1 wherein user is presented with more than one possible trade and wherein said proposed trades comprise:
15 one or more proposed trades allowing a user to trade an item immediately using a financial instrument;
and
one or more proposed trades allowing a user to trade an item immediately for another item.
5. A method according to claim 1 further comprising:
determining a recommended market price for an item.
- 20 6. A method according to claim 1 wherein said new entry can indicate an item for sale, an item for trade for another item, or a request to buy an item.
7. A method according to claim 1 wherein said database comprises a database of user haves and user wants.
8. A method according to claim 1 further comprising:
25 if no trade is accepted by a user for a new item, storing said new item in said database to allow for future matches.
9. A method according to claim 8 further comprising:
when storing said entry, confirming one or more preaccepted trades that said user will accept for said entry without further approval.

10. A method according to claim 8 further comprising:

at any time before an item becomes involved in a confirmed trade, allowing a user to remove an item that user placed in a database.

11. A method according to claim 1 wherein said method supports selling, bartering and offers to buy or barter.

12. A method according to claim 1 further comprising:

accepting from a third user a list and description of items that said third user has for trade;

scanning information to determine whether there is a final trade set possible among said first, second, and third user;

confirming said trade set with said first user, said second user, and said third user.

13. A method according to claim 1 further comprising:

establishing a suggested market price for listed items that are not unique by scanning values estimated for said items by said users.

14. A method according to claim 1 further comprising:

preserving a want list of a user for a period of time and matching that user's wants to have listed at a different time by another user.

15. A method according to claim 1 wherein some or all of the traded items of a user can be a financial instrument.

16. A web-accessible item trading system using one or more computers on a network comprising:

a first set of graphical user interfaces allowing a plurality of users to register personal information and lists of items they have for trade and items they want to receive in trade;

data storage to hold a database of user have and wants;

a trade identifier that scans said database and identifies possible trades; and

a notifier that notifies users when a trade has been identified.

17. The device according to claim 16 wherein said notifier comprises a graphical user interface presenting a trade.

18. The device according to claim 16 wherein said notifier comprises a email engine sending email notification to users presenting a trade.

19. The device according to claim 16 further comprising:
a third set of graphical user interfaces allowing a user to review that user's haves, wants, possible trades, and actions awaiting on pending trades.
20. The device according to claim 16 wherein possible trades may include currency traded by one user.
21. The device according to claim 16 wherein trades identified are limited to two way trades.
22. The device according to claim 16 wherein possible trades identified may include more than two users.
23. The device according to claim 16 further comprising:
an interface allowing a user to browse items based on a location of an item in a category tree.
24. The device according to claim 16 further comprising:
an interface allowing a user to browse items based on a free text search.
25. The device according to claim 16 further comprising:
an interface allowing a user to directly make an offer for an item.
26. The device according to claim 16 further comprising:
an interface showing a listing of items, the listing including an estimated value placed on the item by the user who has the item.
27. The device according to claim 16 further comprising:
an interface showing a listing of items available for trade and indicating items desired by users who have items available for trade.
28. The device according to claim 16 further comprising:
an engine for establishing a suggested price for listed items that are not unique by scanning values estimated for said items by said users.
29. A method of facilitating an N-way trading transaction using a computer system in communication with a network comprising:
storing for a plurality of users a plurality of item entries available for exchange in a database, where said item entries include haves and wants and include an indication of acceptable trades;
scanning said database to identify possible N-way trades involving three or more items;

identifying a completed N-way trade involving three or more items; and
notifying each user involved in said trade of actions user will take to complete said trade.

30. The method according to claim 29 further comprising:

scanning said database to identify possible incomplete N-way trade among two or more users;
5 using said incomplete N-way trade to generate new possible trades for presentation to a new user;
receiving an acceptance from a new user for a trade completing said incomplete N-way trade;

31. The method according to claim 29 wherein an N-way transaction is constructed internally as a swap chain.

32. The method according to claim 29 wherein an N-way transaction produce excess value in a swap
10 chain.

33. The method according to claim 29 wherein a portion of said excess value up to all of said excess value is retained by a system operator.

34. The method according to claim 29 wherein a portion of said excess value up to all of said excess value is distributed as a reward shared among participants in the trade.

15 35. The method according to claim 29 wherein a portion of said excess value up to all of said excess value is used to facilitate trades that otherwise could not occur.

36. The method according to claim 29 wherein a portion of said excess value up to all of said excess value is used to enhance the value of completing trades presented to new users.

20 37. A method of increasing the number of available trades presented to a new user in a swapping system using a computer system in communication with a network comprising:

storing for a plurality of users a plurality of item entries available for exchange in a database, where
said item entries include haves and wants and include an indication of acceptable trades;
scanning said database to identify possible N-way trades involving three or more items; and
using said possible N-way trades to generate new possible trades for presentation in a listing of
25 available items.

38. The method according to claim 37 wherein a generated new trade comprises a preexisting trade presented at a lower price.

39. The method according to claim 37 wherein a generated new trade comprises a new proposed item for item swap.

40. A method of facilitating sale of goods using a computer system in communication with a network comprising:

5 storing for a plurality of users a plurality of item entries available for sale in a database, each item at an initial price;
after presenting an item for sale to users at said initial price for a period of time, discounting said item price by a discount amount; and
representing said item for sale at said new price.

10 41. A method of attracting sellers of goods to a transaction site using a computer system in communication with a network comprising:

accepting from a seller an item for sale at an initial price for an initial period at a discounted listing transaction fee; and
at the end of said initial period, offering to said seller an option to place said item into an automatic
15 discount selling space wherein a price of said item is automatically discounted the longer the item remains listed and unsold.42. A method for exchanging goods using a computer network

comprising:

accepting from a first user a list and description of items that said first user has for trade;
accepting from a second user a list and description of items that said second user has for trade;
20 scanning information to determine whether there is a trade possible between said first user and said second user;
presenting proposed trades to said first user or said second user;
awaiting an initial user to take action on said proposed trades; and
presenting action taken by said initial user to a subsequent user.

25 43. A method according to claim 42 wherein said trades can be exclusively goods for goods.

44. A method according to claim 42 wherein some or all of the traded item of a user can be a financial instrument.

45. A method according to claim 42 further comprising:

accepting from a third user a list and description of items that said third user has for trade;
30 scanning information to determine whether there is a trade possible among said first, second, and third user;

presenting proposed trades to said first user or said second user or said third user;
awaiting an initial user to take action on said proposed trades; and
presenting action taken by said initial user to subsequent users.

46. A method according to claim 42 further comprising:

establishing a market price for listed items that are not unique by scanning values estimated for said items by said users.

47. A method according to claim 42 further comprising:

preserving a want list of a user for a period of time and matching that users wants to haves listed at a later time by another user.

48. A method for buying, selling, or trading goods using a computer network comprising:

receiving items with text descriptions from those with items to trade or sell into a database;
grouping items into zones wherein a single item may be grouped into many different zones;
allowing potential buyers or traders to search for listed items both by full or Boolean text searching and by scanning zones.

49. A method according to claim 48 wherein said zones may be created by a zone host and where said zone host may place items in a zone through queries run on the items in the database.

50. A method according to claim 48 wherein said zones may be created by a zone host and where said zone host may place items in a zone through specific selection of the items in the database.

51. A method according to claim 48 further comprising:

for each item placed in the database, assigning that item to a terminus in a category tree and allowing potential buyers or traders to search for listed items both by category tree or Boolean text searching or by scanning zones.

52. A method according to claim 48 further comprising:

for each item placed in the database, assigning that item to one and only one terminus in a category tree and allowing potential buyers or traders to search for listed items both by category tree or Boolean text searching or by scanning zones.

53. A method according to claim 48 wherein some or all of the traded item of a user can be a financial instrument.

54. A method according to claim 48 further comprising:

accepting from a third user a list and description of items that said third user has for trade;
scanning information to determine whether there is a trade possible among said first, second, and third
user;

5 presenting proposed trades to said first user or said second user or said third user;
awaiting an initial user to take action on said proposed trades; and
presenting action taken by said initial user to subsequent users.

55. A web-accessible item trading system using one or more computers on a network comprising:

10 a first set of graphical user interfaces allowing a plurality of users to register personal information and
register lists of items they have for trade and items they want to receive in trade;
data storage to hold a database of user haves and wants;
a trade identifier that scans said database and identifies possible trades; and
a notifier that notifies users when a possible trade has been identified.

15 56. The device according to claim 55 wherein said notifier comprises a graphical user interface
presenting possible trades.

57. The device according to claim 55 wherein said notifier comprises a email engine sending email
notification to users presenting possible trades.

58. The device according to claim 55 further comprising:

20 a second set of graphical user interfaces allowing a user to select one from a plurality of possible
trades.

59. The device according to claim 58 wherein said second set of graphical user interfaces further
comprises an interface allowing a user to modify terms in a selected possible trade.

60. The device according to claim 55 further comprising:

25 a third set of graphical user interfaces allowing a user to review that users haves, wants, possible
trades, and actions awaiting on pending trades.

61. The device according to claim 55 further comprising:

30 a third set of graphical user interfaces allowing a user to review:
possible trades identifier by said system;
offers from other users; and
trade agreements from other users.

62. The device according to claim 55 wherein possible trades may include currency traded by one user.

63. The device according to claim 55 wherein possible trades identified are limited to two way trades.

64. The device according to claim 55 wherein possible trades identified may include more than two users.

65. The device according to claim 64 further comprising:
a set of graphical interfaces allowing an initial user taking action on an N-way trade to select a first user from whom the initial user will receive an item and a second user to whom the initial user will send an item.

66. The device according to claim 55 further comprising:
an interface allowing a user to browse items based on a location of an item in a category tree.

67. The device according to claim 55 further comprising:
an interface allowing a user to browse items based on a free text search.

68. The device according to claim 55 further comprising:
an interface allowing a user to browse items based on a location of an item in a category tree.

69. The device according to claim 66, 67, or 68 further comprising:
an interface allowing a user to directly make an offer for an item.

70. The device according to claim 66, 67, or 68 further comprising:
an interface showing a listing of items, the listing including an estimated value placed on the item by the user who has the item.

71. The device according to claim 66, 67, or 68 further comprising:
an interface showing a listing of items available for trade and indicating items desired by the users who have items available for trade.

72. The device according to claim 55 further comprising:
an interface allowing a user to browse items based on an interest zone, wherein an interest zone may be a collection of many different types of items selected because of their interest to a particular user community.

73. The device according to claim 55 further comprising:
a message board associated with an item allowing users to exchange information about a particular item.

74. The device according to claim 55 further comprising:

5 an engine for establishing a market price for listed items that are not unique by scanning values estimated for said items by said users.

75. The device according to claim 55 further comprising:

an interface indication allowing a user to preserve a item for a period of time.

76. The device according to claim 55 further comprising:

10 a set of zone creation and management interfaces allowing a zone host to place items in a zone.

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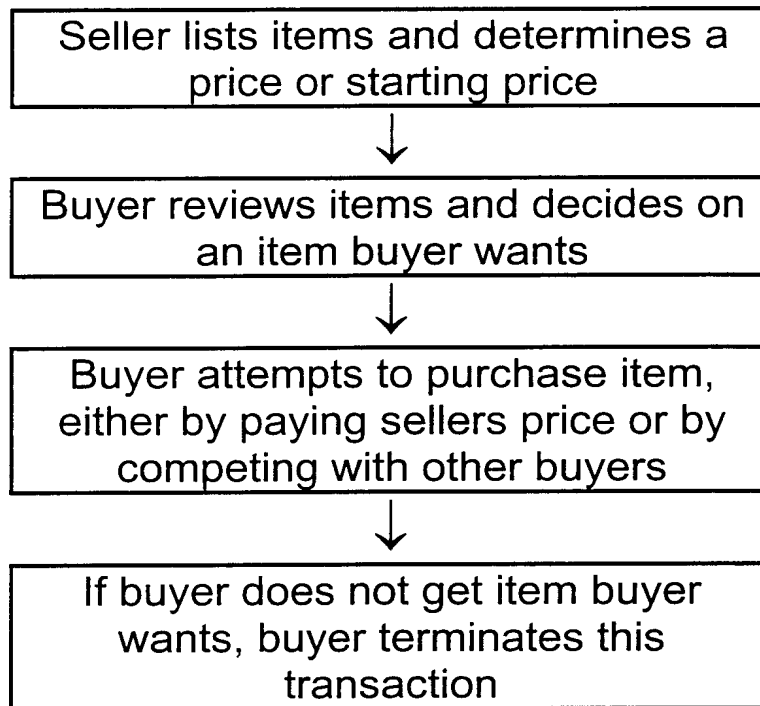


FIG. 1

Communities

- + Allow people sharing a common interest to communicate
- No structure for e-commerce

Auctions

- + Seller obtains highest cash price for wide range of items
- Competitive experience that does not foster cooperative exchange



Classifieds

- + Comprehensive listings of goods, services and wants
- Static, dull content with little feedback

FIG. 2

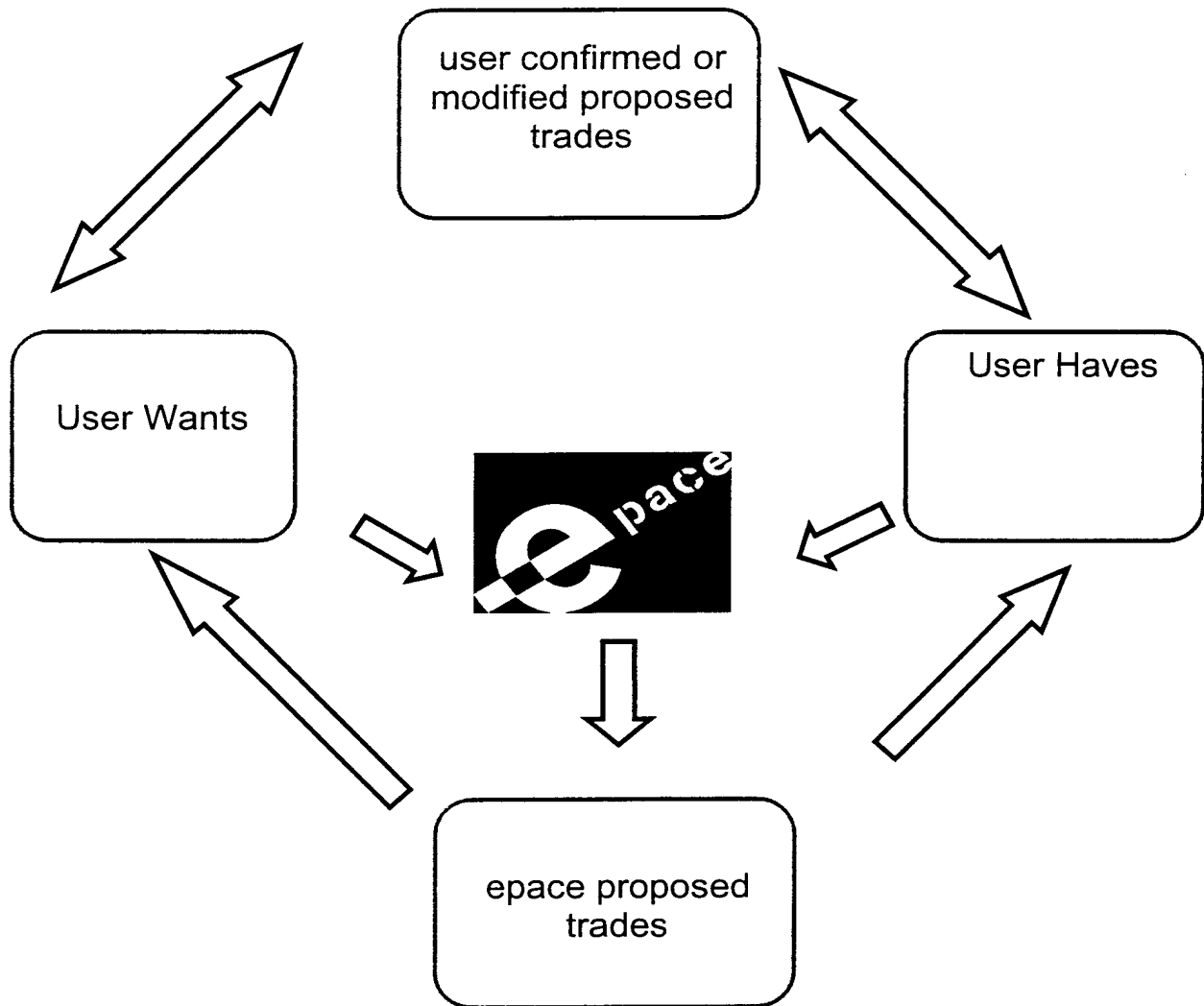


FIG. 3

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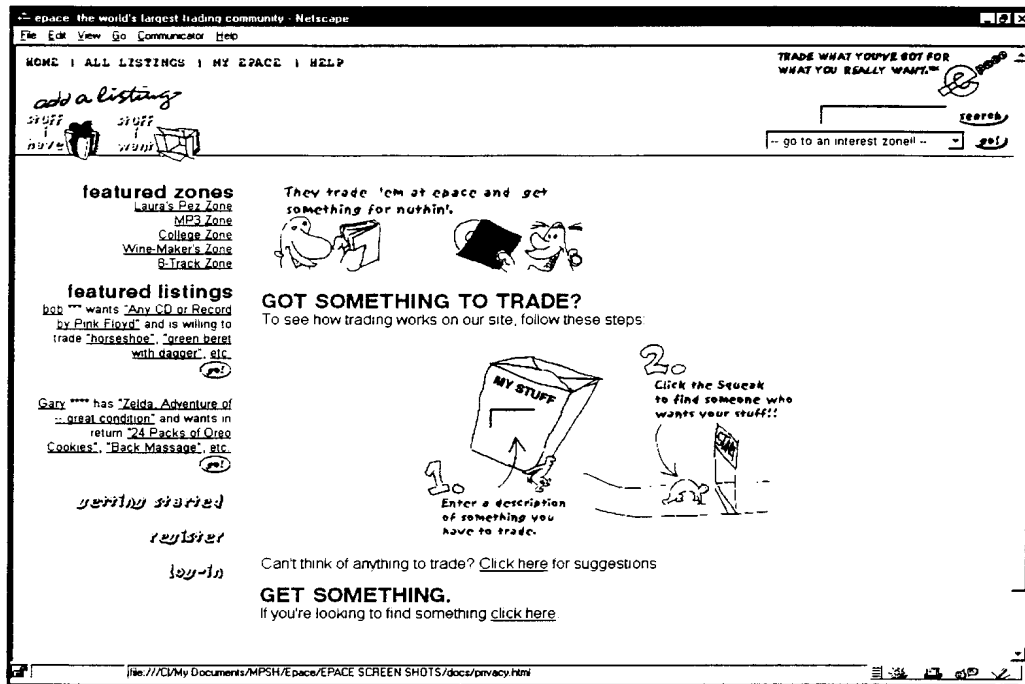


FIG. 4 illustrates a web page from an embodiment of the invention.

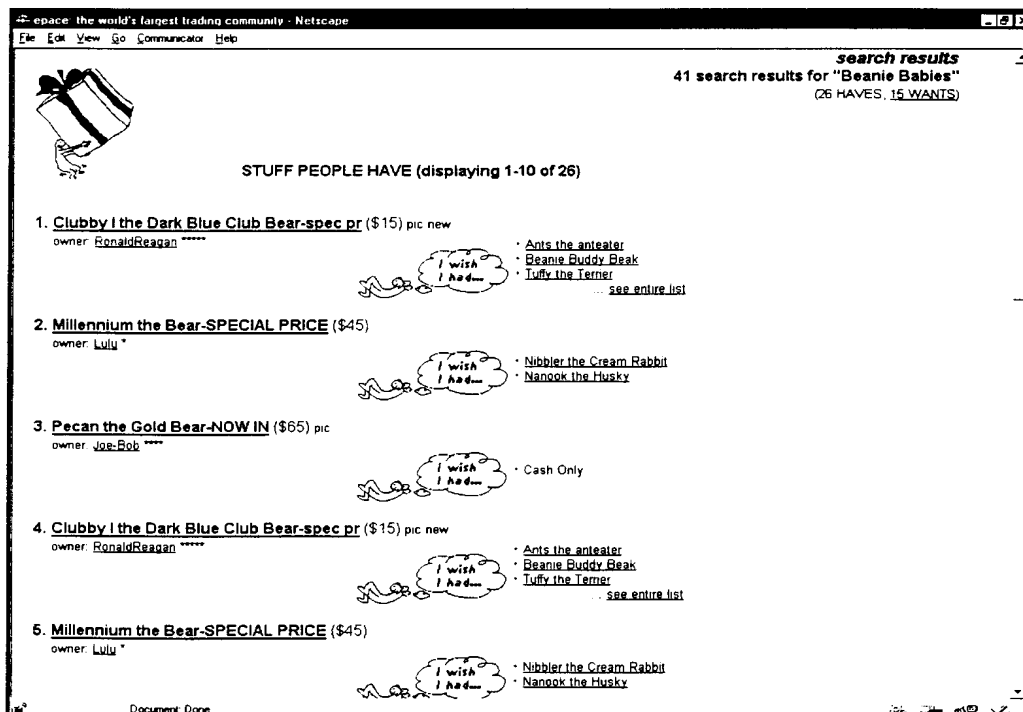


FIG. 5 illustrates a web page displaying search results according to an embodiment of the invention.

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As you may already know, in order to actively participate in trading at epace, it is important that you register with us. Please fill out the simple registration form below and join our thriving trading community. Once you have registered, you will receive an activation code by email. Then you're ready to go!

Registration Info
* required fields

*Select a user name
(No more than 12 characters)

The user name you select will be your nickname on epace
eg "dippy", "BobLovesRugs", "egghead45"

*Choose a password
(No more than 12 characters)

*Retype your password for confirmation

*Email address

If you are a WebTV or AOL user please remove any spaces from your username and add @aol or @webtv, as applicable
eg if your AOL username is bob young, your e-mail address would be bobyoun@aol.com

*Full name

select title

First MI Last

*Address

Address 1

Address 2

City

FIG. 6 illustrates a web page that a user **would** complete to register on-line according to an embodiment of the invention.

HOME | ALL LISTINGS | MY EPACE | HELP

add a listing

TRADE WHAT YOU'VE GOT FOR WHAT YOU REALLY WANT™

go to an interest zone! -- go

Gary
Palookaville, CA, USA
member since: Sept 8, 1999
trades completed: 126

Welcome Gary!
What's happened since your last visit on Saturday, Sept. 2, 2000:

You have received:
3 new offers
4 trades agreements
14 new ratings

epace has identified:
4 suggested 2-way trades
2 suggested 3-way trades
46 matches for 8 of your haves
13 matches for 4 of your wants

To do list:
respond to 4 offers
rate 6 trading partners

Offers Made to You

Date	Description	Respond By
9/4/00	Offer from bob (2-Way, #21554) You give "Green Basketball Shirt" You get "Babe Ruth Baseball Card"	Sept 9, 2000 respond
9/3/00	Counter from Cindy (3-Way, #154454) You give "50's style Hawaiian Shirt" You get "Purple Dinosaur Pants"	Sept 6, 2000 respond
	Counter from BinDaddy John (2-Way, #45554)	Respond By

My epace

Thursday, September 7, 2000

what do you want to do?

- manage my haves & wants
- edit my user description
- review my rating history
- view my trading history
- view my sitting info
- edit my registration info

FIG. 7 illustrates a portion of a web site displaying a user's personalized area according to an embodiment of the invention.

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File Edit View Go Communicator Help

Haves * REQUIRED FIELDS

Have Description

***Category:**
Please select a subcategory from one of the lists below. (Only one please!)

-- Appliances --

-- Art --

-- Books --

-- Clothing --

-- Collectibles --

-- Computing --

-- Garden --

-- Home Electronics --

-- Home Furnishings --

-- Jewelry --

-- Kitchen Tools & Supplies --

-- Movies --

-- Music --

-- Musical Instruments --

-- Tools & Supplies --

-- Toys & Games --

-- Transportation --

-- Video Games --

-- Wine --

***Title:**

Titles should be 40 characters or less, including spaces and punctuation
eg. Baseball glove - large & broken in

Add a Photo:

If you already have a photo online, enter the URL here
This photo will appear next to the title, on the have description page

Description:

HTML code is welcome here
If you would like to include additional pictures in the body of your description,
link to them here using the following format: ``

[Document: Done]

FIG. 8A shows an example of portions of a web site for guiding the user through posting an item for sale or barter according to an embodiment of the invention. FIG. 8B.

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HTML code is welcome here
 If you would like to include additional pictures in the body of your description,
 link to them here using the following format: ``

Estimated Value:

U.S. Dollars
 This value is helpful as a reference for trading and for cash only offers.

Listing valid For:

The default is 12 weeks

Item Location:
 This is only necessary if this information differs from your user shipping address

City:
 State:
 or Region:
 Country:

Online Shipping:

☐ Check here if this item will be shipped electronically and will not require a shipping address.
 (User addresses are only disclosed for shipping purposes, and only when a trade has been agreed upon by all parties.)

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FIG. 8B shows a continuation of the screen from FIG. 8A.

Gary
 Springfield, Anywhere, USA
 member since: Sept 8, 1999
 trades completed: 126

add a listing

Wants

Want Description

***Category:**
 Please select a subcategory from one of the lists below. (Only one please!)

-- Appliances --
 -- Art --
 -- Books --
 -- Clothing --
 -- Collectibles --
 -- Computing --
 -- Garden --
 -- Home Electronics --
 -- Home Furnishings --
 -- Jewelry --
 -- Kitchen Tools & Supplies --
 -- Movies --

* REQUIRED FIELDS

FIG. 9A is an example of a portion of a web site for guiding a user through the process of posting a notice for a wanted item according to an embodiment of the invention.

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-- Wine --

***Title:**

Titles should be 40 characters or less, including spaces and punctuation
eg. Baseball glove - large & broken in

Description:

HTML code is welcome here.
If you would like to include additional pictures in the body of your description,
link to them here using the following format:

Willing To Pay:

U.S. Dollars
This value is helpful as a reference for trading and for cash only offers

Listing Valid For:

12 weeks
The default is 12 weeks.

[clear form](#) [review](#)

Document: Done

FIG. 9B shows a continuation of the screen from FIG. 9A.

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File Edit View Go Communicator Help

HOME | ALL LISTINGS | MY EPACE | HELP

add a listing
stuff
have

TRADE WHAT YOU'VE GOT FOR
WHAT YOU REALLY WANT.™

go to an interest zone!!

Gary
Palookaville, CA, USA
member since: Sept 8, 1999
trades completed: 126

suggested trades

back to my epace homepage

Congratulations!! You've been matched with potential trading partners!! See below for the suggested trade scenarios that fulfill your haves and wants.

Suggested Trades (3-Way)

- You trade your:** "Schwinn 10spd Bicycle"

in return for: "Beanie Babies -- only mint condition"

Suggested Trade #2136675

Suggested Trade #8636654
- You trade your:** "Schwinn 10spd Bicycle"

in return for: "Rollerblades - Size 11"

Suggested Trade #7658877
- You trade your:** "Vintage Stand-Up Hair Dryer"

in return for: "DVD and LaserDisk Player"

Suggested Trade #66633454

Document: Done

FIG. 10B illustrates a web page displaying the system identified suggested three way transactions according to an embodiment of the invention.

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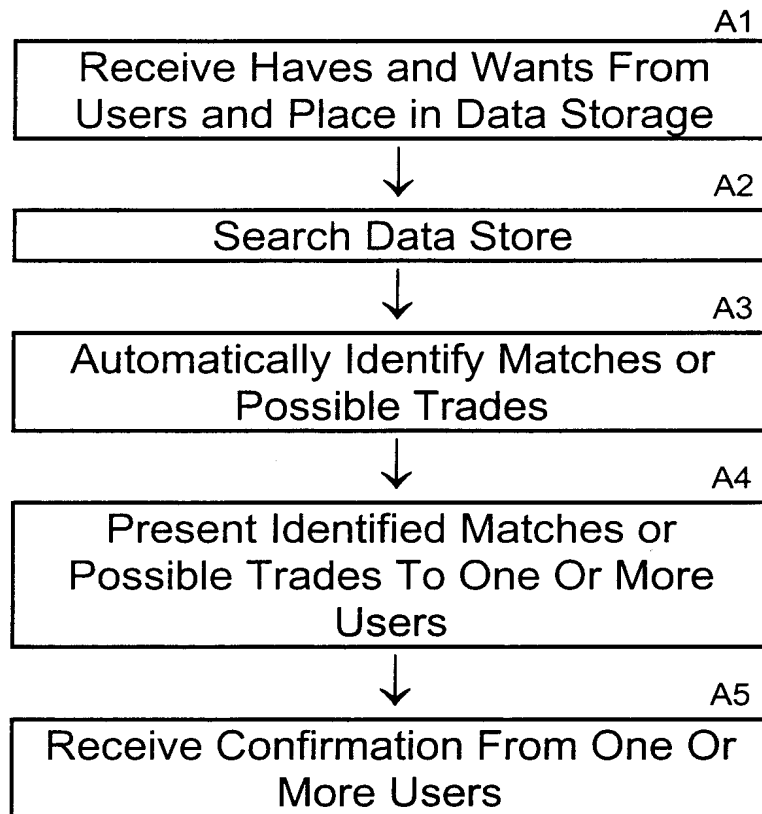


FIG. 10A

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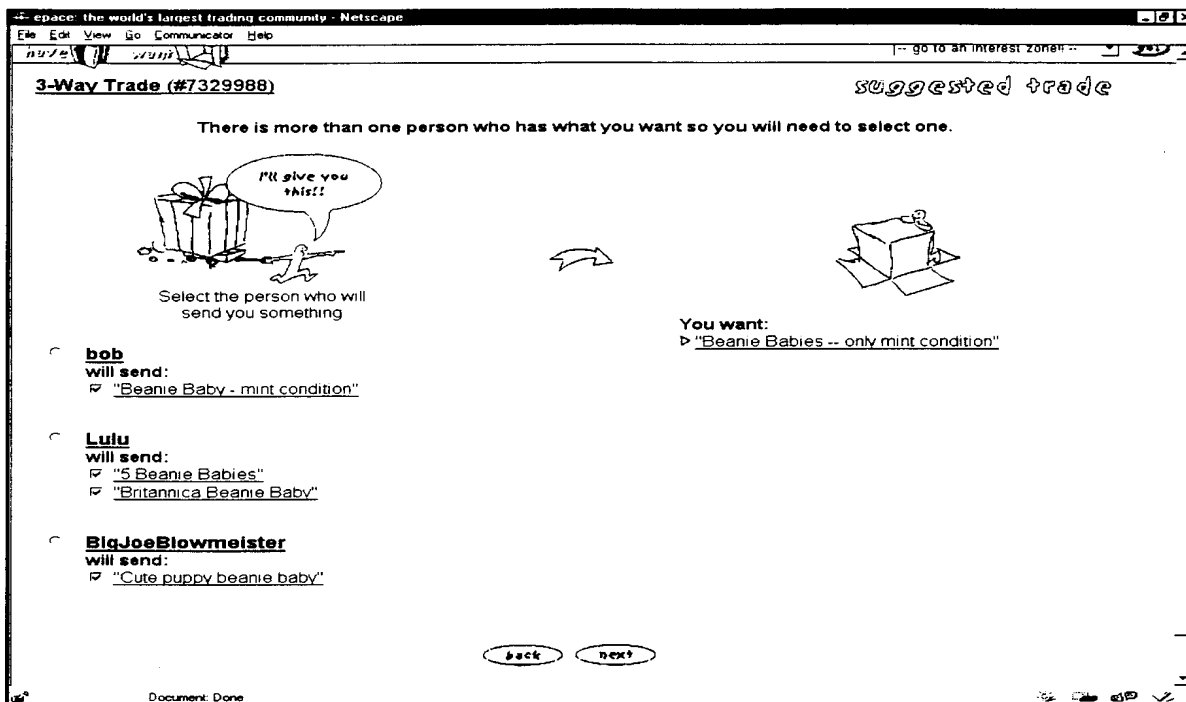


FIG. 11 illustrates a web page displaying selection of a specific trading partner in a 3-way trade to send you goods that you want. according to an embodiment of the invention.

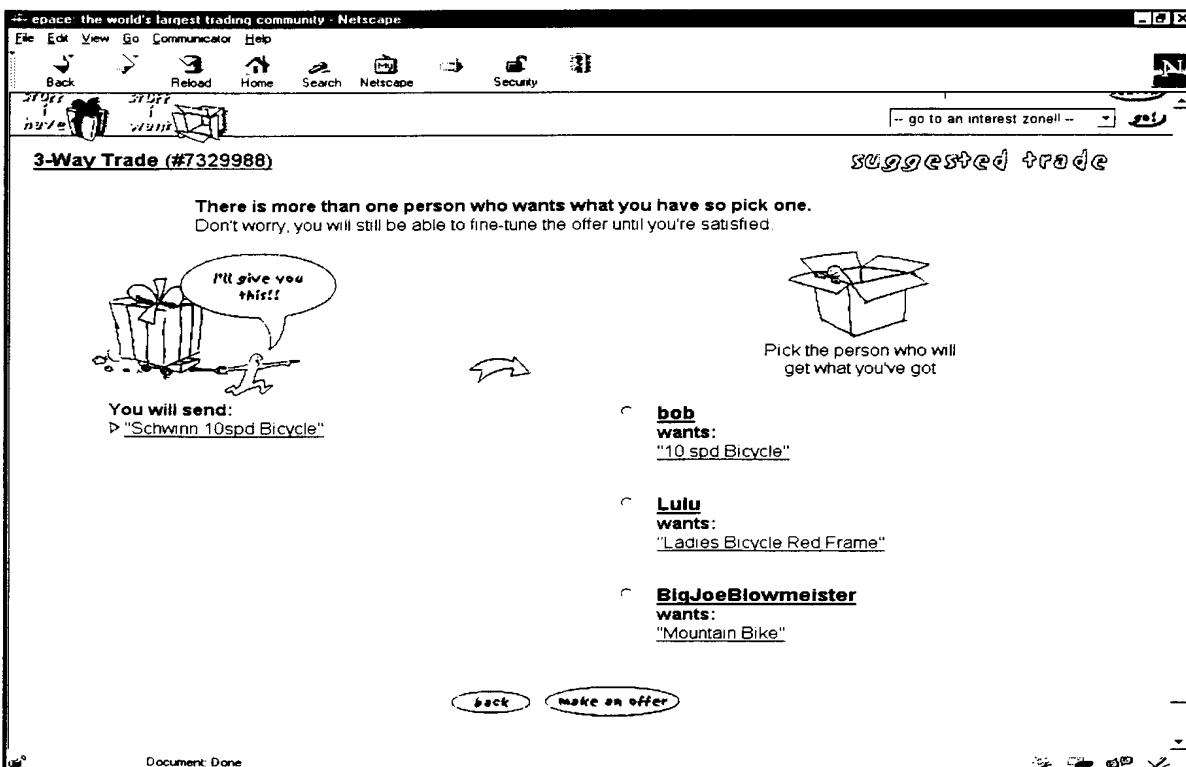


FIG. 12 illustrates a web page displaying selection of a specific trading partner in a 3-


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way trade to receive goods that you have.

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File Edit View Go Communicator Help

3-Way Trade (#498356)
Originated by: Gary (July 29, 1999)


Make or edit an offer



Gary will send to Cindy
▷ "Crichton - Jurassic Park"
▷ \$10

Ship to:
London, England

[edit](#)



Cindy will send to lulu
▷ "Biscuit Beanie"
▷ "Headless Beanie Monster"

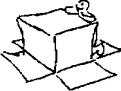
Ship to:
Brooklyn, NY, USA

[edit](#)

lulu will send to Gary
▷ "Ladies Bicycle Red Frame"

Ship to:
Palookaville, CA, USA

[edit](#)



5 days -
Offer valid for:

(select when this offer should expire)

Special Conditions:
[Click here](#) to add special conditions
-- like, "ship by Tuesday" -- or
to change your "ship to" address.

[cancel](#)

[review offer](#)

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Document Done

FIG. 13 illustrates a portion of a web page displaying the three way transaction with the ability to enter an edit dialog according to an embodiment of the invention.

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File Edit View Go Communicator Help

3-Way Trade (#498356)
Originated by: Gary (July 29, 1999)

make or edit an offer

Special Conditions:
(Want the item FedEx'd? Need to complete the trade by Tuesday? Enter it here.)

Ship to Address:
(We will only display the city, state/region and country to other users during negotiations. Once a trade is completed both parties will receive the full "ship to" address of their trading partner.)

address 1: 54-32 High Street
address 2:
city: Palookaville
state: California
or region:
zip/postal code: 01199
country: United States

☐ check here if address is different from your user address.

back

Document: Done

FIG. 14 illustrates a web page for making or editing an offer or adding special conditions according to an embodiment of the invention.

epace: the world's largest trading community - Netscape

File Edit View Go Communicator Help

HOME | ALL LISTINGS | MY EPACE | HELP

add a listing


TRADE WHAT YOU'VE GOT FOR WHAT YOU REALLY WANT™

search


-- go to an interest zone! --

3-Way Trade (#498356)
Originated by: Gary (July 29, 1999)

edit offer


Gary will send to Cindy
(select items and/or cash to be offered)

☐ "3 Bond movies on VHS - original box" \$55
☐ "22 Beanie Babies: I'm sick of 'em" \$10
☐ "Florida Apt swap for Manhattan" \$50
☒ "Crichton - Jurassic Park" \$5 pic
☒ Monetary Amount - US\$ 10


Cindy wants

"Paisley Bell Bottoms" \$--
"X-Large Cowboy Hat" \$20
"Pink Princess Telephone" \$-- new
"Any NASA Memorabilia" \$--

cancel submit changes

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Document: Done

FIG. 15 illustrates a web page for editing the details of an offer according to an embodiment of the invention.

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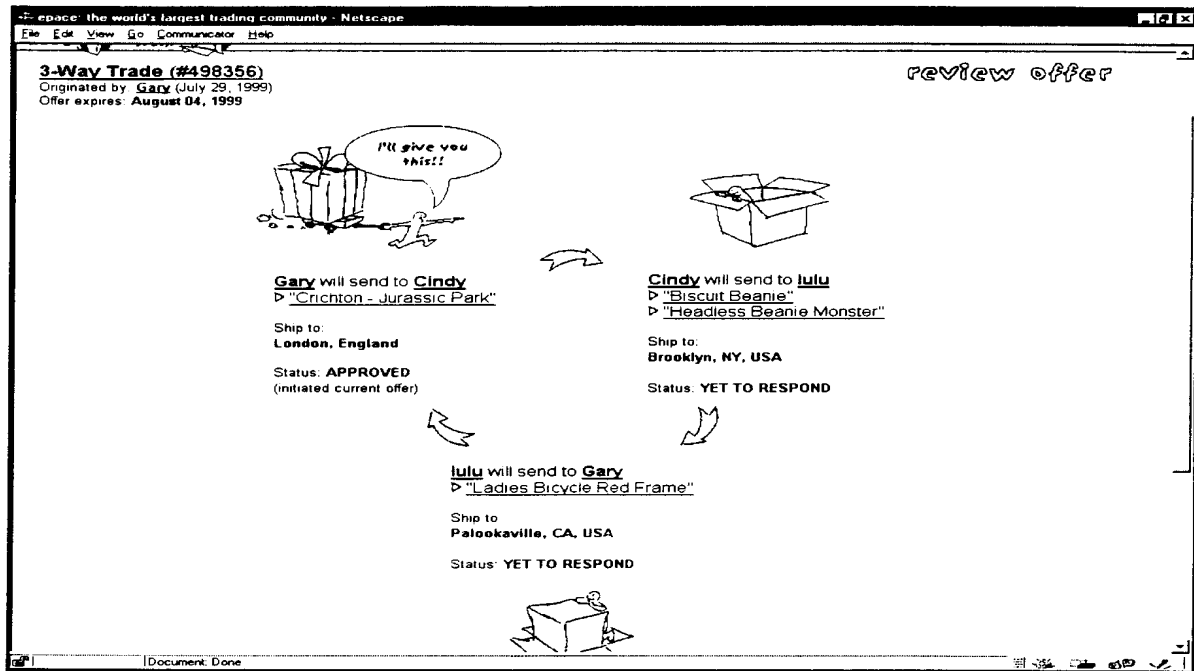


FIG. 16A illustrates a portion of a web page showing a three way deal review according to an embodiment of the invention.

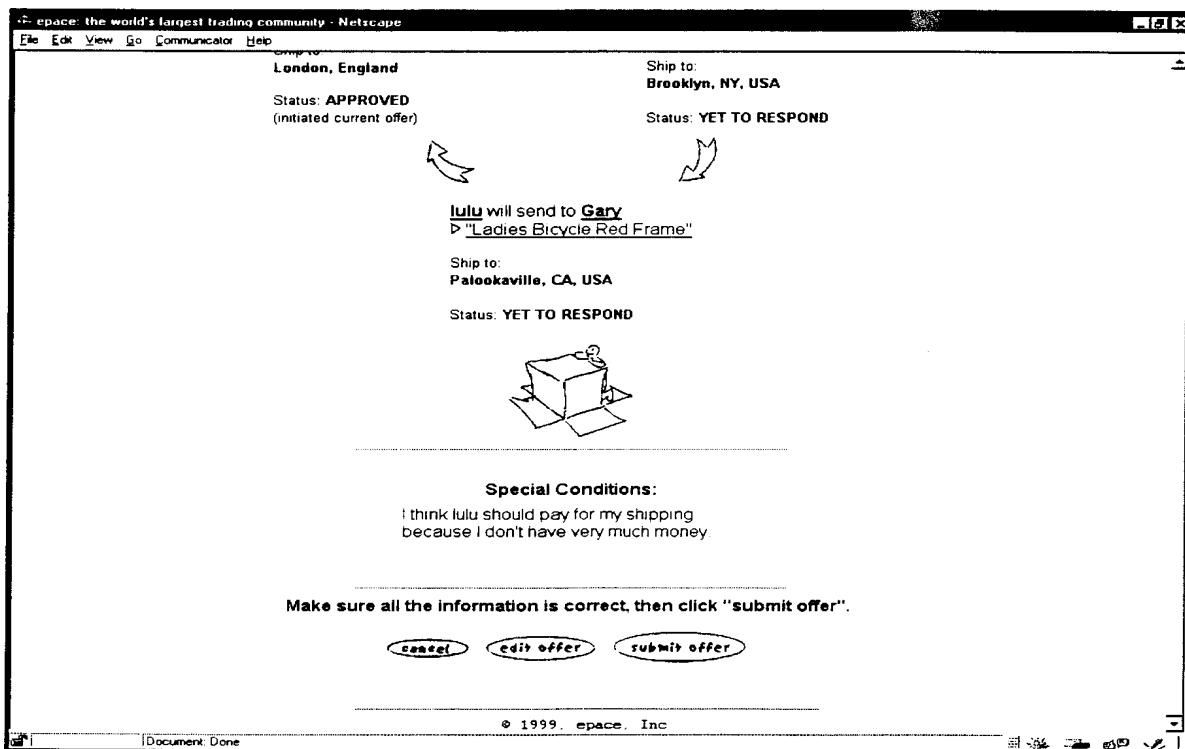


FIG. 16B illustrates a portion of a web page showing a three way deal review according to an embodiment of the invention.

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epace: the world's largest trading community - Netscape

File Edit View Go Communicator Help

add a listing
stuff stuff
stuff stuff

search

-- go to an interest zone!! --

Gary
Springfield, Nowhere, USA
member since: Sept 8, 1999
trades completed: 126

rate a trading partner
back to my epace homepage

Trade #2250

bob sent you "1 Glass slipper" in exchange for your "Yellow Big Wheels".

oh

Was the item or payment shipped to you in the expected timeframe? ☐ Yes ☐ No

Was what you received described accurately on epace? ☐ Yes ☐ No

Would you trade with this person again? ☐ Yes ☐ No

Overall how would you rate your trading partner?

Exceeds overall expectations ☐ Great

Meets overall expectations ☐ OK

Does not meet overall expectations ☐ Not so great

Trade did not occur, no hard feelings ☐ No trade

Additional Comments:

You can add additional comments regarding your trading partner here.
(maximum 250 characters please)

clear form submit

Document Done

FIG. 17 illustrates a web page showing a rating questionnaire according to an embodiment of the invention.

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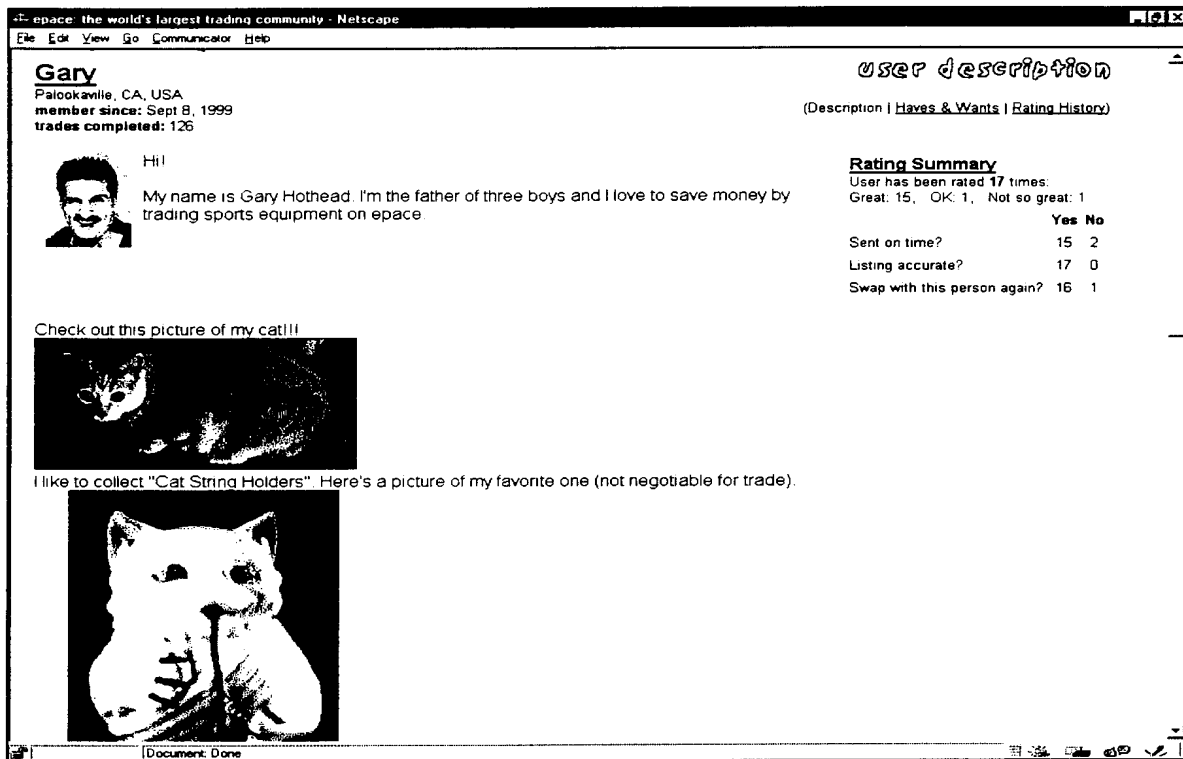


FIG. 18 illustrates a web site showing a user's ratings.

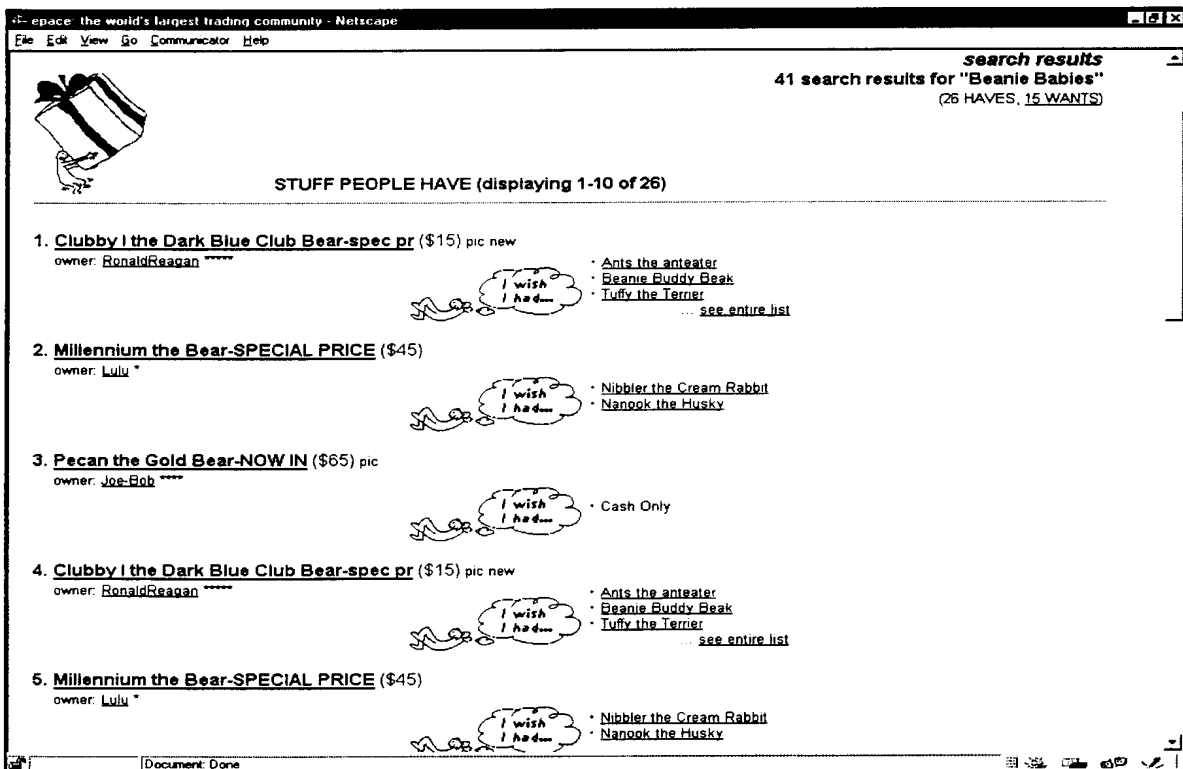


FIG. 19 illustrates an example of a web page displaying the results of a free text search in one embodiment of the invention.

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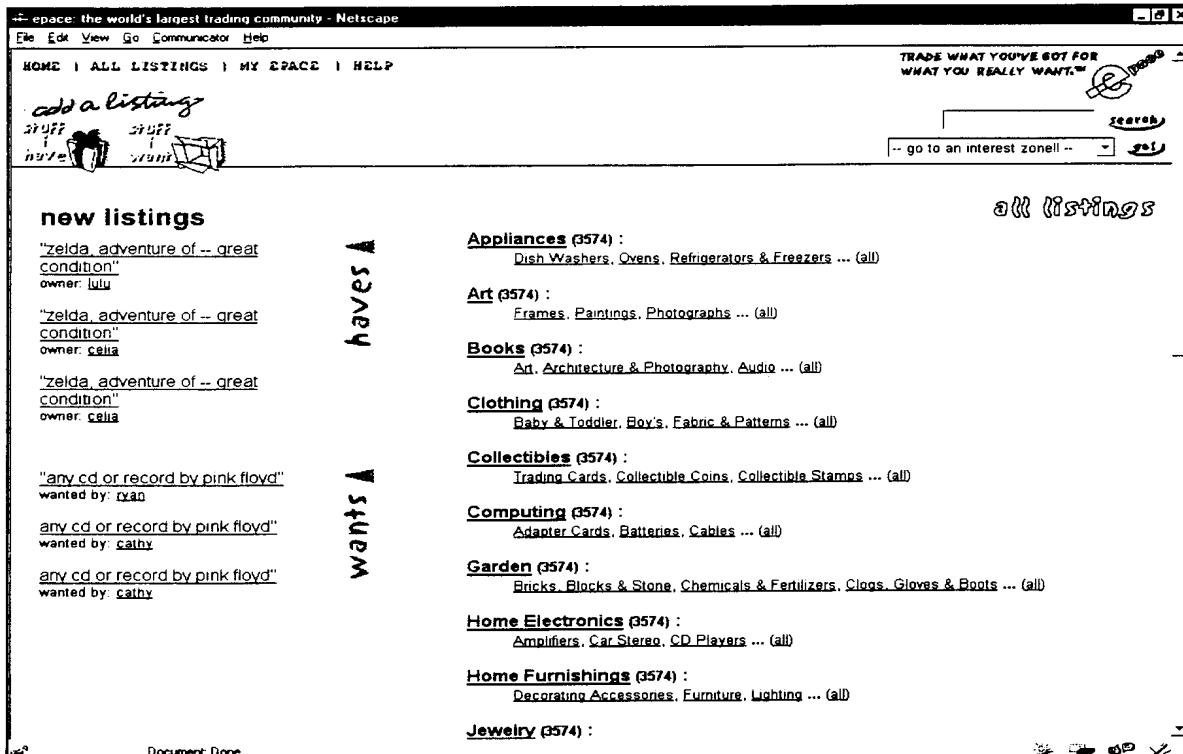


FIG. 20 illustrates a web page listing the available categories in one embodiment of the current invention.

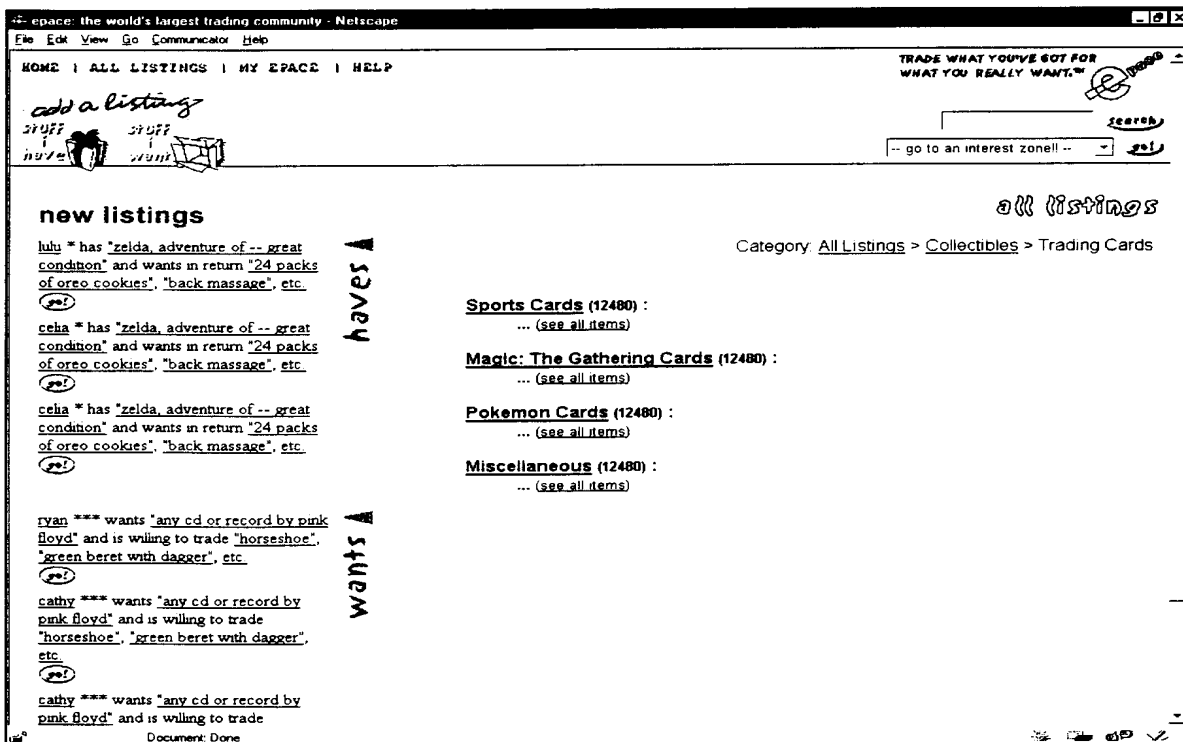


FIG. 21 illustrates an example of a web page that might be accessed in navigating through subcategories according to an embodiment of the invention.

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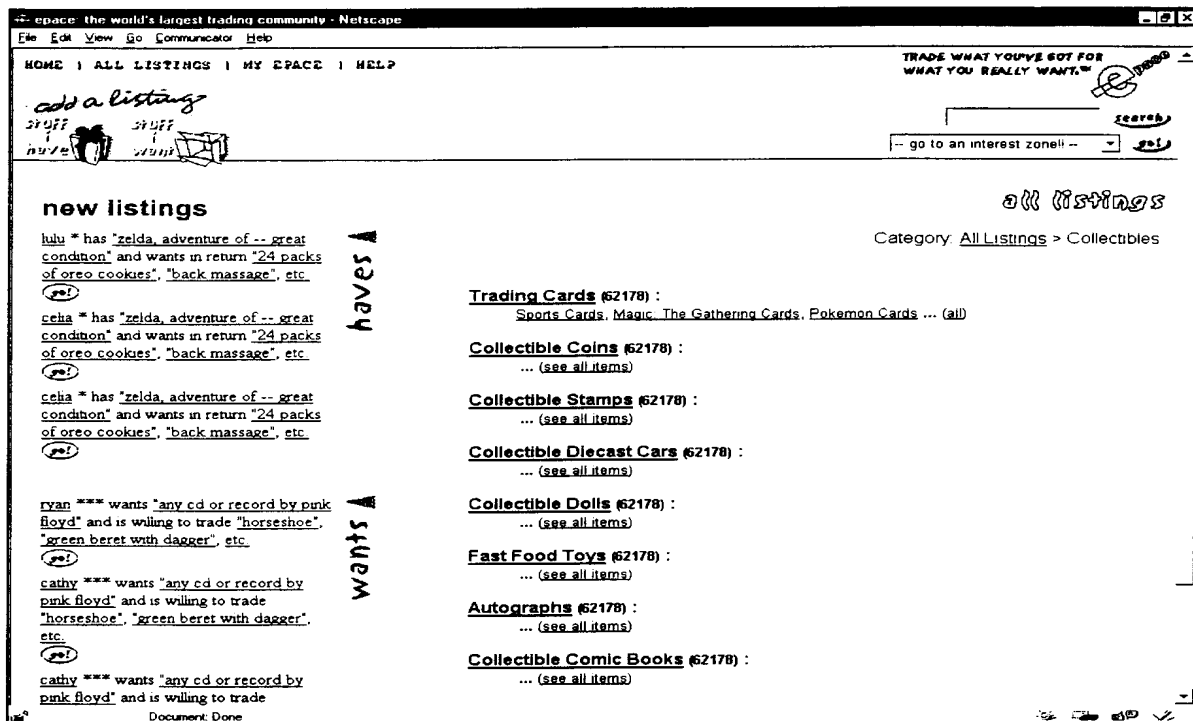


FIG. 22 illustrates an example of a web page that might be accessed in navigating through subcategories according to an embodiment of the invention.

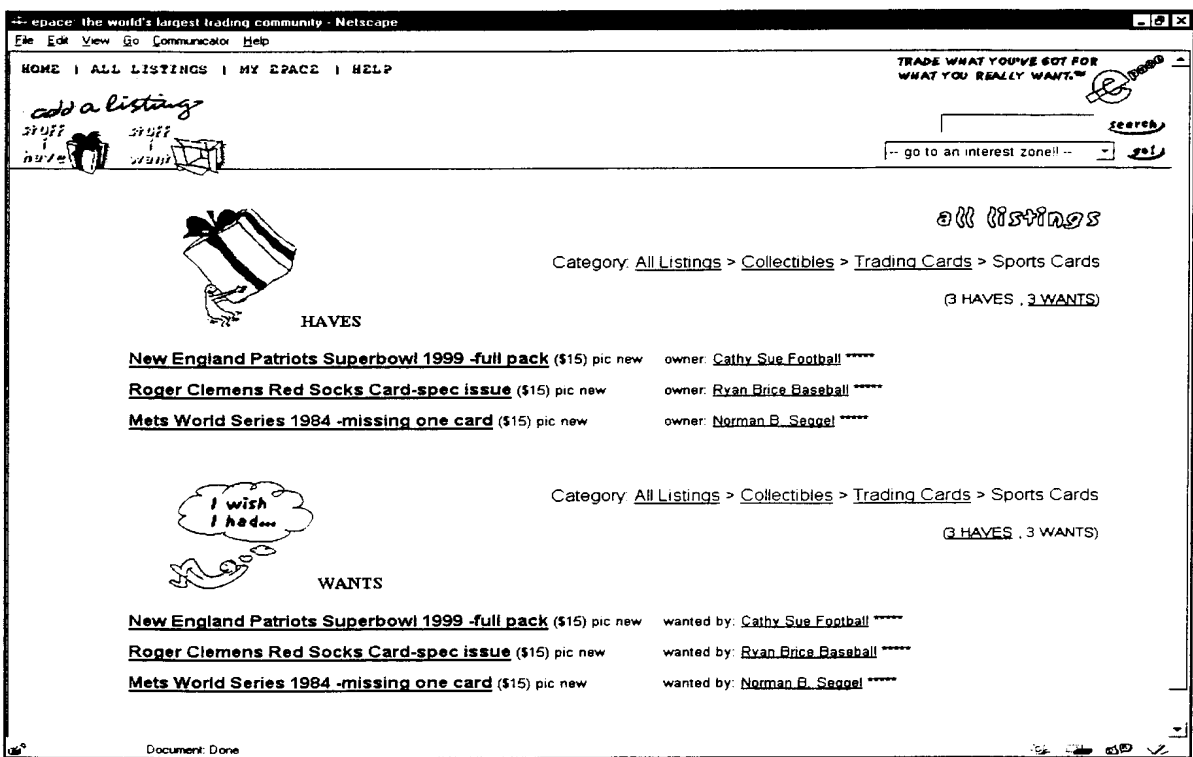


FIG. 23 illustrates an example of a web page that might be accessed in navigating through subcategories according to an embodiment of the invention.

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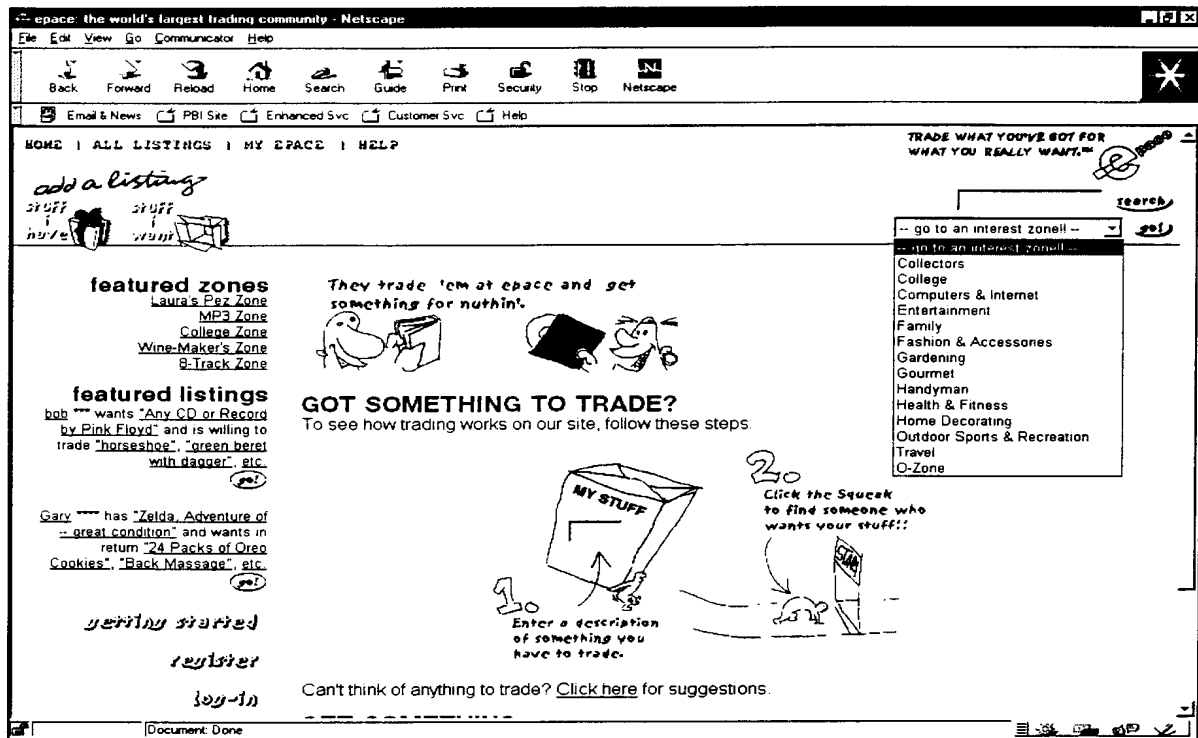


FIG. 24 illustrates an example of a web page showing a list of zones available for browsing according to an embodiment of the invention.

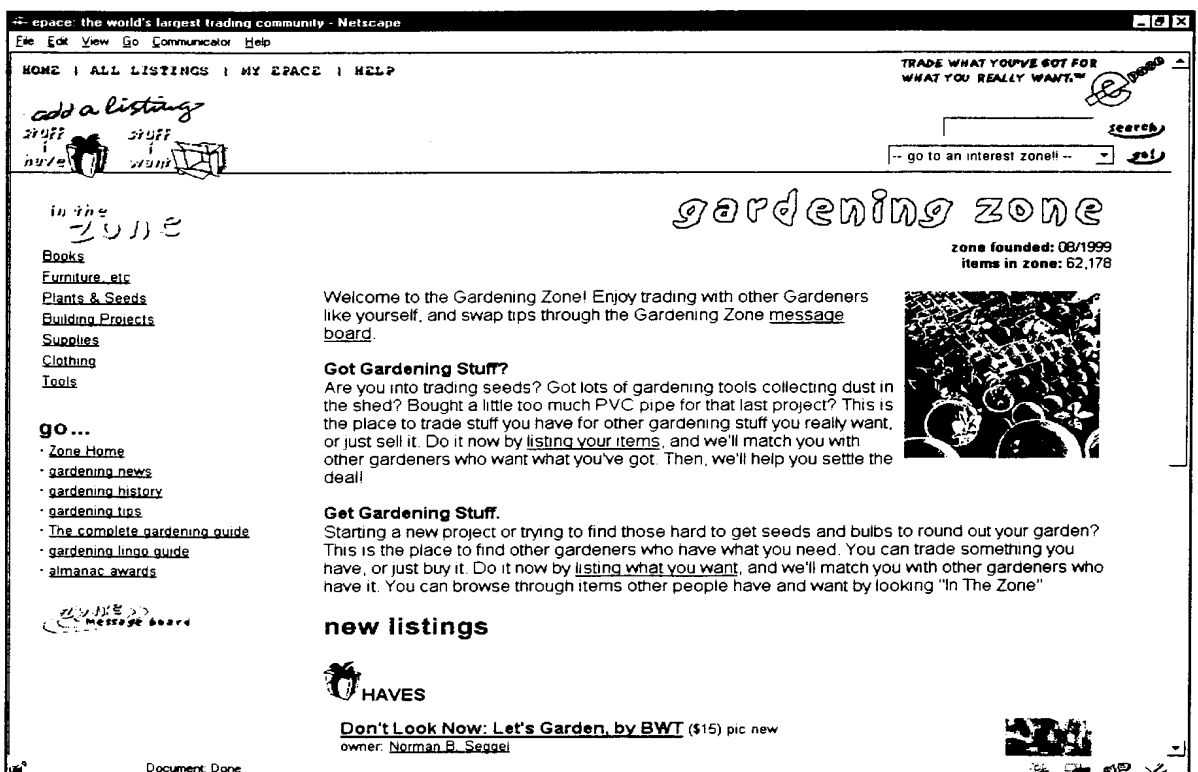


FIG. 25 is an example of a web page displaying the first page of a zone according to an embodiment of the invention.

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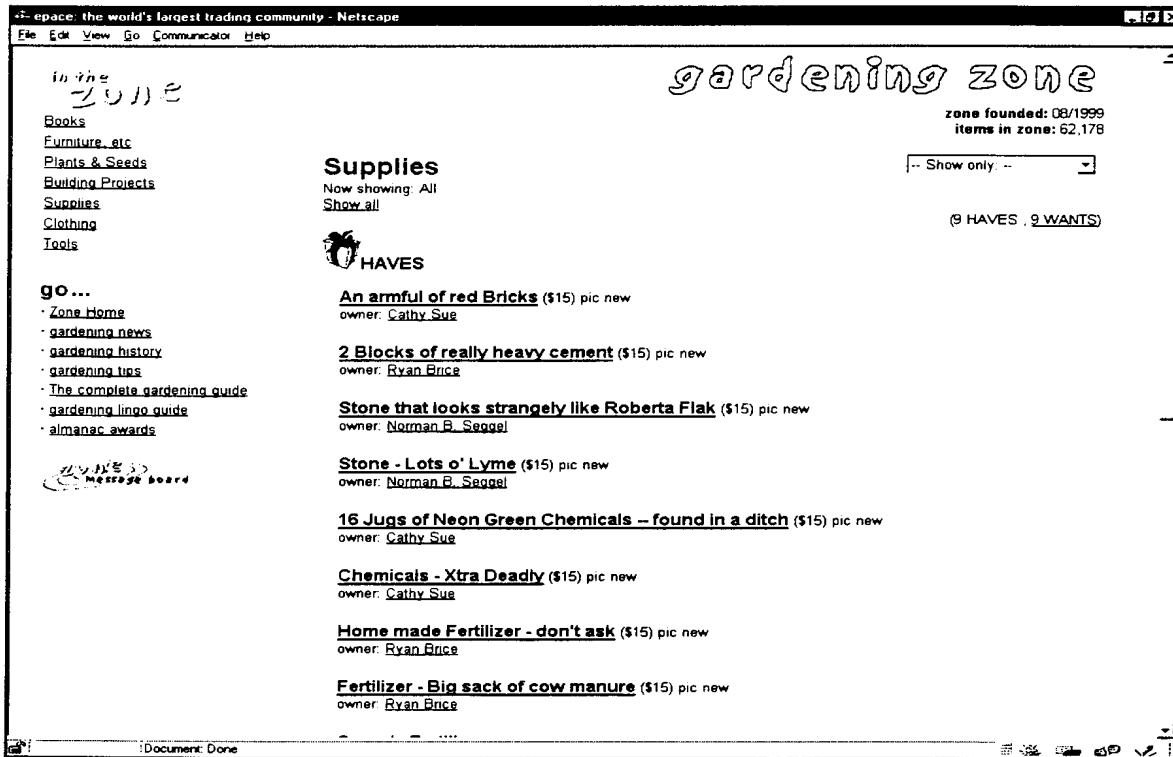


FIG. 26 illustrates an example of a web site illustrating the gardening supplies offered through the Gardening Zone according to an embodiment of the invention.


Maple Beanie Baby (excellent condition)			
User	Ask	Bid	
Brad Chase	\$27		
Jeff Smith	\$21		
Fred Barnes	\$21		
John Ruth	\$20.50		
Linda Jones	\$20		
Mark Johnson		\$19.50	
Mandy Rogers		\$19.00	
James Nolte		\$18	
Jane Johansen		\$11	

FIG. 27 illustrates several offers for buying and selling a Maple Beanie Baby® according to an embodiment of the invention.

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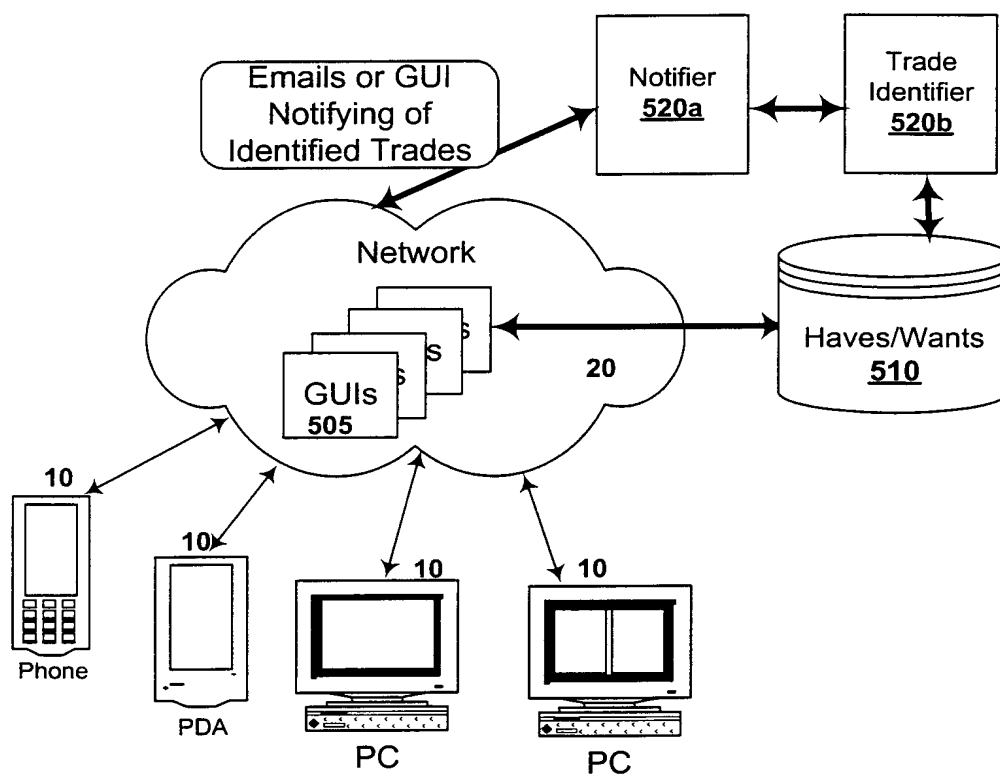


FIG. 28

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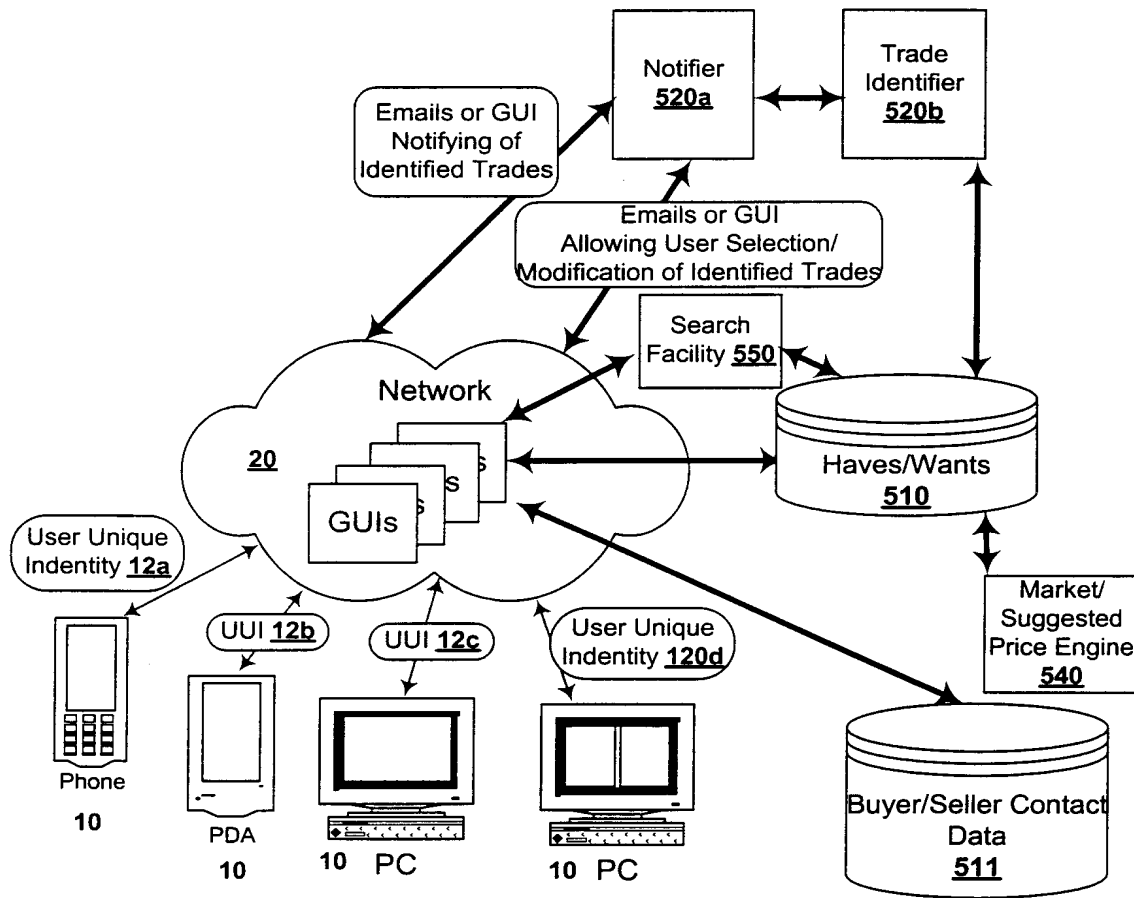


FIG. 28

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US00/26803

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) :G06F17/60

US CL :705/37, 26, 27

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 705/37, 26, 27

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
The Microsoft Press Computer Dictionary, Third Edition

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Extra Sheet.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 5,845,266 A (LUPIEN et al.) 01 December 1998, see especially column 3, lines 23-36, and column 4, lines 45-59.	1-2 ----- 3-76
Y	US 5,500,793 A (DEMING et al.) 19 March 1996, note in particular Figure 2, column 2, lines 54-65, column 6, lines 27-61, and column 7, lines 14-50.	3-76
Y	US 5,799,151 A (HOFFER) 25 August 1998, see column 3, lines 7-21 and column 11, lines 6-17.	73
A	US 3,573,747 A (ADAMS et al.) 06 April 1971, see entire document.	1-76
Y	US 5,940,806 A (DANIAL) 17 August 1999, see column 1, lines 53-62.	24, 67

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
A document defining the general state of the art which is not considered to be of particular relevance	*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	*G* document member of the same patent family
O document referring to an oral disclosure, use, exhibition or other means	
P document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

03 DECEMBER 2000

Date of mailing of the international search report

03 JAN 2001

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US00/26803

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,754,850 A (JANSSEN) 19 May 1998, see column 1, lines 19-29.	51, 52
A	US 5,905,975 A (AUSUBEL) 18 May 1999, see entire document.	1-76
Y	US 5,946,667 A (TULLS et al.) 31 August 1999, see Abstract and column 4, lines 23-35.	5, 13, 26, 28, 70
A	US 4,903,201 A (WAGNER) 20 February 1990, see entire document.	1-76
A	US 5,835,896 A (FISHER et al.) 10, November 1998, see entire document.	1-76
Y	US 5,550,746 A (JACOBS) 27 August 1996, see Abstract.	48-54
Y	US 5,664,115 A (FRASER) 02 September 1997, see whole document.	1-76
Y	US 5,799,284 A (BOURQUIN) 25 August 1998, see entire document.	1-76
Y	Microsoft Press Computer Dictionary, Third Edition, 1997, see page 173 for e-mail, and page 220, for graphical user interface.	16-28, 55-76.
Y	Rubinstein, E., "Discount Store News, Vol. 36, No. 9, pp. 66, 80, "REI: Surfing the Great Outdoors," 5 May 1997, see paragraph beginning "REI is currently testing a new search engine . . ."	24, 67
Y	Seybold Report on Internet Publishing, Vol. 2, No. 5, p. 8, January 1998, "Catalogs and Commerce Reach the Little Guys," see paragraph beginning "The catalog module offers personalized presentations . . ."	51, 52
Y	InfoQuick press release, 19 May 1998, "InfoQuick Launches WebStir(TM) for Workgroups; On-line Tool Provides the Latest Component Information Instantly," see paragraph beginning "WebStir, which can be used independently . . ."	23, 66, 68-71
Y	FreeShop press release, 17 June 1998, "FreeShop(R) Announces Major Marketing Relationship With Microsoft," see second paragraph.	72
Y	PARKS, E., Machine Design, Vol. 71, No. 11, pp. 64-68, "Controls Supplier Puts Everything under One Cyber Roof," 3 June 1999, see caption, "After customers enter the store . . ."	23, 66, 68-71

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US00/26803

B. FIELDS SEARCHED

Electronic data bases consulted (Name of data base and where practicable terms used):

WEST, keyword search of U.S. Patents, Japanese and European Patent Abstracts, Derwent World Patent Abstracts, and IBM Technical Disclosure Bulletins; keywords: price, recommend\$5, suggest?3, estimat\$3, survey\$3, category tree, text search, Boolean search, seller, interest, zone, class, subclass, set, subset, category. DIALOG search, files 2, 9, 15, 16, 20, 35, 47, 65, 77, 99, 148, 160, 233, 256, 275, 278, 347, 348, 349, 473, 474, 475, 570, 583, 621, 623, 624, 634, 635, 636, 810, 813; keywords: database, data base, internet, web, buy???, sell???, trad???, exchang???, ecommerce, e-commerce, electronic commerce, text, Boolean, search, category, tree, trees, price, prices, recommend????, suggest???, estimat???, survey???, class, classes, subclass, subclasses, set, sets, subset, subsets, category, categories, zone, zones, interest.